Section 10: Descriptions of Certifications, Licenses, and Assessments
2006-2007

Overviews of industry-wide or national credentials:

- Descriptions
- Award Criteria
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Section 10: Descriptions of Certification/License/Assessments

This section presents the credentials approved for student-selected verified credit by the Virginia Board of Education in February 2005 along with brief descriptions and the courses which may prepare a student for the approved examinations. **The relationships between these credentials (industry certifications, licenses, and other assessments), and the criteria for earning verified credit and diploma seals are explained in Section 9: Verified Credits, Diploma Seals, and Board-Approved Credentials.** Section 9 also fully explains the requirements for teacher/program certification.

Note: Information Technology certifications may be designated as follows:
*Considered an entry-level certification
**Considered a mid-level certification; may require significant curriculum mapping
***Considered an advanced-level certification; will need to be mapped to curriculum at the academy level
+Specific approved Brainbench assessments by clusters can be found at http://www.brainbench.com/xml/bb/common/testcenter/subcat.xml?cat1=9

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
A+ Certification** Certification of competency of entry-level computer service technicians. This is a popular first certification, especially for people who want to enter the information technology (IT) job market.	Pass the following tests: • A+ Operating System Technologies examination • A+ Core Hardware Service Technician examination	CompTIA	Choose one of the following: • Computer Network Software Operations 6650 • Advanced Computer Network Software Operations 6651 • Computer Systems Technology 8622/8623/8624 • Electronics Systems I 8416/8417 • Electronics Systems II 8412 • Electronics Systems III 8413 • Information Technology in Production Systems 8496
A+ Certification** Operating Systems Technologies Examination An examination that certifies competency in operating systems technologies for entry-level computer service technicians. Examination is considered a "pathway" examination to full A+ Certification.	Pass the following test: • A+ Operating System Technologies examination	CompTIA	Choose one of the following: • Computer Network Software Operations 6650 • Advanced Computer Network Software Operations 6651 • Computer Systems Technology 8622/8623/8624 • Electronics Systems I 8416/8417 • Electronics Systems II 8412 • Electronics Systems III 8413 • Information Technology in Production Systems 8496

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
A+ Certification** **Core Hardware Examination** An examination that certifies competency in core hardware technologies for entry-level computer service technicians. Examination is considered a "pathway" examination to full A+ Certification.	Pass the following test: • A+ Core Hardware Examination	CompTIA	Choose one of the following: • Computer Network Software Operations 6650 • Advanced Computer Network Software Operations 6651 • Computer Systems Technology 8622/8623/8624 • Electronics Systems I 8416/8417 • Electronics Systems II 8412 • Electronics Systems III 8413 • Information Technology in Production Systems 8496
ACCESS Certification of knowledge and skill in culinary arts	Pass a written exam focusing on application of concepts and tasks performed by chefs and cooks (either food/meal or pastry specialty).	American Culinary Federation, Inc. (ACF)	Choose one of the following: • Culinary Arts 8521/8522/8523 • Culinary Arts I 8275 • Culinary Arts II 8276
Accounting (Basic) Assessment Occupational competency assessment of skills and knowledge covered in a basic secondary level accounting program	Pass the NOCTI knowledge-based exam, Accounting—Basic (2000), consisting of 114 test items. Test includes journalizing and posting, payroll preparation, banking and banking procedures, automated accounting, merchandise inventory, and completing the accounting cycle.	National Occupational Competency Testing Institute (NOCTI)	Choose one of the following: • Accounting 6320 • Advanced Accounting 6321
Accounting—Complete Assessment Occupational competency assessment of skills and knowledge covered in an advanced secondary level accounting program	Pass the NOCTI knowledge-based exam, Accounting—Complete Assessment (2900), consisting of 159 test items. Test includes journalizing and posting, payroll preparation, banking and banking procedures, automated accounting, merchandise inventory, completing the accounting cycle, and advanced accounting principles.	National Occupational Competency Testing Institute (NOCTI)	• Accounting 6320 • Advanced Accounting 6321
Administrative Assisting Assessment Occupational competency assessment of skills and knowledge covered in courses covering office procedures and office/computer applications	Pass the NOCTI knowledge-based exam, Administrative Assisting (3001), consisting of 181 test items. Test includes keyboarding/computer applications, interpersonal/employability skills, records management, office procedures, communication skills, computational skills/accounting, and mail processing.	National Occupational Competency Testing Institute (NOCTI)	Choose one of the following: • Computer Applications 6611 • Computer Information Systems 6612 • Advanced Computer Information Systems 6613 • Legal Systems Administration 6735 • Medical Systems Administration 6730 • Office Administration 66216622 • Office Specialist 6740/6741/6742 • Word Processing 6625

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
Adobe Certified Expert* Certification of a candidate who has passed an Adobe Product Proficiency Exam for a specific Adobe software product. The certified user is considered to be an expert-level user of the software product.	Pass a 1-2 hour product proficiency exam on desired Adobe software product. Exams are computer-delivered, closed-book tests consisting of 60-90 multiple-choice questions. Examples of exams: Adobe Acrobat 5.0, Adobe After Effects 4.1, Adobe FrameMaker 7.0, Adobe GoLive 6.0, Adobe Illustrator 10.0, Adobe InDesign 2.0, Adobe Photoshop 6.0, Adobe Premiere 6.0, Adobe LiveMotion 1.0, Adobe PageMaker 7.0	Adobe Systems, Incorporated	Choose one of the following: • Design, Multimedia, and Web Technologies 6630 • Advanced Design, Multimedia, and Web Technologies 6631 • Graphic Imaging Technology 8660/8661/8662
Advanced Concepts of Business and Marketing Certificate Certification awarded for advanced levels of competency, based on business-derived standards, in core business concepts and skills (marketing emphasis) and knowledge of specific business/marketing functions (e.g., selling or industries such as retail or hospitality)	Pass a knowledge-based exam consisting of 125 multiple-choice test items. Test includes items from the following areas: business administration, communication, distribution, economics, financing, marketing-information management, pricing, product management, professional development, promotion, and selling.	ASK Institute (DECA/MarkED)	Choose one of the following: • Adv. Marketing 8130/8131 • Adv. Fashion Marketing 8145/8146 • Adv. Hotel/Motel Marketing 8162/8163 • Adv. Global Marketing and Commerce 8136 • Adv. Sports, Entertainment, and Recreation Marketing 8177/8178 • Adv. Travel/Tourism Marketing 8167/8168 • Financial Services Marketing 8180/8181 • Marketing Management 8132
Advertising Design Assessment Occupational competency assessment of skills and knowledge covered for an instruction program focusing on the advertising design job market sector	Pass the NOCTI knowledge-based exam (2019) consisting of 193 test items. Test includes color, reproduction, typography, tools and equipment, printing surfaces, drawing/illustration, production, computer literacy, photography, communication, skills, and design.	National Occupational Competency Testing Institute (NOCTI)	Advertising Design 8570/8571/8572
Agriculture Mechanics Assessment An occupational competency assessment of skills and knowledge covered in a typical Agricultural Mechanics course	Pass the NOCTI knowledge-based exam (1002) consisting of 175 test items. Test includes orientation and safety, agricultural mechanic skills, agricultural power and machinery, agricultural electrical power and processing, agricultural structures, and soil and water treatment.	National Occupational Competency Testing Institute (NOCTI)	Choose one of the following: • Introduction to Power, Structural, and Technical Systems 8016 • Agricultural Power Systems 8018
Air Conditioning Certification The basis for all other certifications involving the vapor compression refrigeration system. Today's systems use new refrigerants and oils compared to units built just a few years ago. Any technician responsible for diagnosis and repair must possess a strong background in refrigeration systems.	Pass a written exam focusing on the following: theory of heat, temperature and pressure; physical states of matter and change of state; refrigeration and refrigerants; refrigerant and oil management; refrigeration applied to air conditioning, leak detection, tubing and piping practices, system evacuation, system charging, tool usage and calibration, equipment maintenance, and safety.	HVAC Excellence	Heating, Ventilation, Air Conditioning, and Refrigeration 8503/8504/8505

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
Air Cooled Gas Engine Assessment Occupational competency assessment of skills and knowledge covered in a typical Small Engine Repair course	Pass the NOCTI knowledge-based exam (2068) consisting of 200 test items. Test includes fuel system, lubricating system and carburetion, compression, ignition, governor, engine disassembly, engine assembly, maintenance, engine technology, failure, and starters.	National Occupational Competency Testing Institute (NOCTI)	Choose one of the following: • Small Engine Repair 8021/8082 • Small Engine Technology 8725/8726/ 8727
Architectural Drafting Assessment Occupational competency assessment of skills and knowledge covered in secondary design/drafting programs focusing on architectural drafting.	Pass the NOCTI knowledge-based exam (2004) consisting of 196 test items. Test includes basic drawing skills, performing architectural activities, site/plot plans, sections and details, terms, symbols and abbreviations, supplemental architectural activities, interpreting construction documents, Computer Aided Drafting (CAD), accessibility (ADA) and safety concerns, plans and elevations.	National Occupational Competency Testing Institute (NOCTI)	Drafting 8530/8531/8532
Audio-Visual Communications Technology Assessment Occupational competency assessment of skills and knowledge covered in a secondary course that includes audiovisual production and communication content	Pass the NOCTI knowledge-based exam, Audio-Visual Technology Communications Assessment (2005) consisting of 196 test items. Test includes getting started/organization, creating objects, drawing, editing, layers, color and line types, text, dimensioning, blocks, attributes and Xrefs, printing and plotting, and utilities.	National Occupational Competency Testing Institute (NOCTI)	Television Production 8688/8689/8690
AutoCAD Certifications		Brainbench	Choose one of the following: • Technical Drawing and Design 8434/8435 • Engineering Drawing and Design 8436/8493 • Architectural Drawing and Design 8437/8492 • Digital Visualization 8459 • Drafting 8530/8531/8532
AutoCAD 2000 Certification Hands-on measure of ability and knowledge to design in two dimensions, using the AutoCAD 2000 software program	Pass an on-line knowledge and software use assessment that covers getting started/organization, creating objects, drawing, editing, layers, color and line types, text, dimensioning, blocks, attributes and Xrefs, printing and plotting, and utilities.		
AutoCAD 2002 Certification Certification of skills and knowledge in using the design/drafting software program, AutoCAD 2002	Pass an interactive, on-line assessment that measures the ability to design in two and three dimensions, using AutoCAD 2002. The test covers annotation, drawing, drawing shapes, drawing view, editing, editing objects, file management, format, inserting objects, and utilities and settings.		
AutoCAD 2004 Certification Certification of skills and knowledge in using the design/drafting software program AutoCAD 2004	Pass an interactive, online assessment that measures the ability to design in two dimensions using AutoCAD 2004. Some of the items in the test contain drawing files that must be opened and manipulated in the AutoCAD software. The test covers Annotation, Drawing, Drawing Shapes, Drawing View, Editing, Editing Objects, File Management, Format, Inserting Objects, and Utilities and Settings.		

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
Automotive Technician Examination Certification of skill in automobile service and repair. Examination is considered a "pathway" examination to full ASE certification in a specialty area upon completion of required work experience.	Pass at least <u>one</u> of the following eight specialty exams: engine repair, automatic transmission and transaxle, manual drive train and axles, suspension and steering, brakes, electrical and electronic systems, heating and air conditioning, or engine performance. Verified credit will be awarded for the passing of each certification specialty examination (up to a maximum of four credits).	National Institute for Automotive Service Excellence (ASE)	Choose one of the following: • Automotive Technology—Certified 8506/8507/8508 • Automotive Servicing—Non-Certified 8710/8711/8712
Automotive Youth Education Systems (AYES) Exit Examinations Certification of skill in automotive service and repair. Examinations are considered "pathway" examinations potentially leading to ASE industry certification.	Verified credit will be awarded for passing any <u>two</u> AYES exit examinations: A4—Steering and Suspension, A5—Brakes, A6—Electrical/Electronics, A8—Engine Performance.	Automotive Youth Educational Systems (AYES)	Choose one of the following: • Automotive Technology—Certified 8506/8507/8508 • Automotive Servicing—Non-Certified 8710/8711/8712
Barbers Virginia state license to practice the cutting, styling, and care of human hair	• Complete the training required by the licensing board as defined in the Code of Virginia. • Pass the written and performance elements of Virginia licensing examination.	Virginia Board of Barbers and Cosmetology (Department of Professional & Occupational Regulations)	Barbering 8740/8741/8742
Basic Principles of Construction: Residential Construction Academy Examination Examination of skills and knowledge covered in the course materials, "Residential Construction Academy: Basic Principles for Construction," Thomson Delmar Learning in Partnership with the Home Builders Institute	Pass an online assessment that measures the skills and information necessary for success in a construction career. The examination covers the following: working in the construction industry; safety on the jobsite; scaffolds, ladders, and auxiliary power; whole numbers, decimals, fractions and construction math; linear measure, perimeter area, volume, and right angles; combined operations; fasteners; selection, use and care of common tools; print reading; views, scales, lines, symbols and plan views; elevations, sections, and details.	Thomson Delmar Learning/Home Builders Institute	Choose one of the following: • Building Trades 8515/8516/8517 • Carpentry 8601/8602/8603 • Cabinetmaking 8604/8605/8606 • Electricity 8533/8534/8535 • HVACR 8503/8504/8505 • Masonry 8512/8513/8514 • Plumbing 8551/8552/8553
BICSI Registered Installer, Level 1 Cabling certification based on *BICSI Telecommunications Cabling Installation Manual*, 2nd ed.	• Pass a written 2-hour exam made up of 85 multiple choice or true/false questions. The Level 1 passing score is 60%. • Pass a hands-on test, successfully completing two Level 1 Installer tasks to industry standards. This portion of the exam takes approximately 20 minutes per task.	BICSI (International Telecommunications Association)	Electricity 8533/8534/8535

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
Brainbench Network Administration Certifications* Certification of knowledge and skills required for one or more skill set areas relating to network administration	Pass any <u>one</u> assessment in the Brainbench **Network Administration** skill cluster (see +note at top of this section). These assessments provide certification of specific skill set knowledge in various areas relating to the architectures and protocols used in local and wide area networks. Examples: Network Monitoring, Network Technical Support, Network Concepts.	Brainbench	Choose one of the following: • Computer Network Software Operations 6650 • Advanced Computer Network Software Operations 6651
Brainbench Systems Administration Certifications* Certification of knowledge and skills required for one or more skill set areas relating to computer systems administration	Pass any <u>one</u> assessment in the Brainbench **Systems Administration** skill cluster (see +note at top of this section). These assessments provide certification of specific skill set knowledge in various areas relating to the architectures and protocols used in computer systems and their operational software. Examples: MS Windows XP Desktop Administration, Unix Administration (General), Widows 2000 Desktop Administration, Linux Administration (Red Hat).	Brainbench	Choose one of the following: • Computer Network Software Operations 6650 • Advanced Computer Network Software Operations 6651 • Computer Systems Technology 8622/8623/8624
Brainbench Technical Support Certifications* Certification of knowledge and skills required for one or more skill set areas relating to technical support for the personal computer end user.	Pass any <u>one</u> assessment in the Brainbench **Technical Support** skill cluster (see +note at top of this section). These assessments provide certification of specific skill set knowledge in various areas relating to the support of end users of personal computers. Examples: Technical Help Desk (Microsoft), MS Windows 2000 Desktop Administration, Computer Technical Support, MS Windows Server 2003 Administration	Brainbench	Choose one of the following: • Computer Network Software Operations 6650 • Advanced Computer Network Software Operations 6651 • Computer Systems Technology 8622/8623/8624
Brainbench Software Development Certifications* Certification of knowledge and skills required for one or more skill set areas relating to knowledge of programming languages and practices.	Pass any <u>one</u> assessment in the **Software Development** skill cluster (see +note at top of this section). These assessments provide certification of specific skill set knowledge of various programming languages and practices. Examples: C++ Fundamentals, Java 2 Fundamentals, JavaScript, Visual Basic 6.0 Fundamentals, Visual Basic.NET, Visual C++	Brainbench	Choose one of the following: • Programming 6640 • Advanced Programming 6641 • Advanced Database Design and Management 6661 • Desktop, Multimedia, and Web Technologies 6630 • Advanced Desktop, Multimedia, and Web Technologies 6631
Brainbench Web Design and Development Certifications* Certification of knowledge and skills required for one or more skill set areas relating to knowledge of all aspects of web development, web page design, programming and scripting languages as well as basic web architecture.	Pass any <u>one</u> assessment in the **Web Design and Development** skill cluster (see +note at top of this section). These assessments provide certification of specific skill set knowledge of various web design and development tools to include programming and scripting languages. Examples: Dreamweaver MX, Flash MX, Internet Concepts, Internet Technology Fundamentals, HTML 4.0, XML Concepts, Web Design Concepts, Web Development Concepts, MS Front Page 2000, JavaScript 1.5 Fundamentals,	Brainbench	Choose one of the following: • Design, Multimedia, and Web Technologies 6630 • Advanced Design, Multimedia, and Web Technologies 6631

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
Brainbench Web Administration Certifications* Certification of knowledge and skills required for one or more skill set areas relating to knowledge of Internet architecture and the administration of web servers.	Pass any <u>one</u> assessment in the **Web Administration** skill cluster (see +note at top of this section). These assessments provide certification of specific skill set knowledge of Internet architecture and the administration of web servers. Examples: WWW Concepts, Web Server Administration, Internet Industry Knowledge, E-Commerce Concepts, MS Internet Explorer 4.0	Brainbench	Choose one of the following: • Design, Multimedia, and Web Technologies 6630 • Advanced Design, Multimedia, and Web Technologies 6631 • Advanced Database Design and Management 6661
Brainbench Desktop Publishing Software Certifications* Certification of knowledge and skills required for one or more skill set areas relating to knowledge of industry-leading graphics, page layout, and publishing software.	Pass any <u>one</u> assessment in the **Desktop Publishing Software** skill cluster (see +note at top of this section). These assessments provide certification of specific skill set knowledge of industry-leading graphics, page layout, and publishing software. Examples: Adobe Illustrator 8.0, Adobe PageMaker 6.5, Adobe Photoshop 7.0, Macromedia Director 8, Quark Xpress	Brainbench	Choose one of the following: • Communication Systems 8415 • Graphic Communications Systems 8458 • Imaging Technology 8455 • Design, Multimedia, and Web Technologies 6630 • Advanced Design, Multimedia, and Web Technologies 6631 • Graphic Imaging Technology 8660/8661/8662
Cabinetmaking Assessment Occupational competency assessment of skills and knowledge covered in an instructional program in cabinetmaking	Pass the NOCTI knowledge-based exam (1014) consisting of 168 test items. Test includes: safety, power sawing, drill and drill press, jointer and planer, router and shaper, constructing joints, basic fastening, sanding and finishing, casework design and layout, cutting and shaping casework components, assembling and installing casework, finishing surfaces, transporting and installing casework, and wood lathe.	National Occupational Competency Testing Institute (NOCTI)	Cabinetmaking 8604/8605/8606
CAD Assessment Occupational competency assessment of skills and knowledge covered in a secondary design/drafting program focusing on computer assisted design methods	Pass the NOCTI knowledge-based exam (2973) consisting of 98 test items. Test includes: identify hardware and operating systems; use hardware and operating systems; interpret and read blueprints; create and manipulate mechanical drawing information; draw and design assemblies; and use 3-D modeling.	National Occupational Competency Testing Institute (NOCTI)	Drafting 8530/8531/8532
Carpentry: Residential Construction Academy Examination Examination of skills and knowledge covered in the course materials, "Residential Construction Academy: Carpentry," Thomson Delmar Learning in Partnership with the Home Builders Institute	Pass an online assessment that measures the skills and knowledge required to work professionally in the residential carpentry area. The examination covers the following: tools and materials; hand and power tools; wood and wood products; fasteners; rough carpentry; blueprints and codes; building layout; concrete form construction; floor, wall and ceiling framing; scaffolds, ladders, and horses; roof framing; exterior finish, windows, and doors; roofing; siding and decks; interior, insulation, and wall finish; stair framing and finish; cabinets and countertops.	Thomson Delmar Learning/Home Builders Institute	Choose one of the following: • Building Trades 8515/8516/8517 • Carpentry 8601/8602/8603 • Cabinetmaking 8604/8605/8606

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
Carpentry Assessment Occupational competency assessment of skills and knowledge covered for an instructional program in carpentry	Pass the NOCTI knowledge-based exam (2015) consisting of 140 test items. Test includes hand tools, power tools, blueprints and specifications, building materials and fasteners, measuring and layout operations, foundation, forms and concrete, rough framing, exterior finish, interior finish, basic mathematics, and interior system installation.	National Occupational Competency Testing Institute (NOCTI)	Carpentry 8601/8602/8603
Carpentry, National Construction Career Test Certification of knowledge and skills (defined as Levels 1 and 2 competencies) in the carpentry trade area. The certification exam is based on the NCCER *Contren Learning Series* standardized curriculum (Carpentry, Levels 1 and 2).	Pass an exam that covers the following: basic safety; introduction to construction math; introduction to hand and power tools; introduction to blueprints; basic communication and employability skills; wood building materials, fasteners, and adhesives; floor systems; wall and ceiling framing; roof framing; windows and exterior doors; reading plans and elevations; site layout one—distance measurement and leveling; introduction to concrete and reinforcing materials; foundations and flatwork; exterior finishing; roofing applications; thermal and moisture protection; stairs; framing with metal studs; interior finish one—doors; interior finish three—window, door, floor, and ceiling trim.	National Center for Construction Education and Research (NCCER)	Choose one of the following: • Building Trades 8515/8516/8517 • Carpentry 8601/8602/8603
Carpentry Level One, National Construction Career Test Certification of knowledge and skills defined as Level 1 competency in the carpentry trade area. The certification exam is based on the NCCER *Contren Learning Series* standardized curriculum (Level 1, Carpentry).	Pass an exam that covers the following: basic safety; introduction to construction math; introduction to hand and power tools; introduction to blueprints; basic communication and employability skills; wood building materials, fasteners, and adhesives; floor systems; wall and ceiling framing; roof framing; windows and exterior doors.	National Center for Construction Education and Research (NCCER)	Choose one of the following: • Building Trades 8515/8516/8517 • Carpentry 8601/8602/8603

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
Certification for Legal Professionals (ALS) Entry-level certification as an accredited legal professional	Pass an exam with three components: 1) written communication; 2) office procedures and legal knowledge; and 3) ethics, human relations, and judgment.	The Association for Legal Professionals	• Accounting 6320 or Advanced Accounting 6321 **and** • Office Administration 6621 **and** • Legal Systems Administration 6735
Certified Computer Service Technician (CST) Certification of skill in and knowledge of basic computer electronics as applied to computer operation, maintenance, and repair	Pass the written CST certification examination, demonstrating knowledge of basic electronics concepts and principles that form the foundation of all other industry specialty knowledge, skills, and abilities; basic computer hardware operations and problems; and general human/customer relations skills.	Electronics Technicians Association, International (ETA)	Choose one of the following: • Computer Systems Technology 8622/8623/8624 • Electronics Technology 8536/8537/8538
Certified Dental Assistant: Infection Control Examination (ICE) One of three assessments leading to completion of the Certified Dental Assistant credential (CDA)	Pass a knowledge-based exam consisting of 100 multiple-choice questions. The exam includes collection and recording of data, patient and dental health care work education, prevention of cross-contamination and transmission, maintaining aseptic conditions, selecting disinfection or sterilization, performing sterilization procedures, performing disinfection procedures, occupational safety.	Dental Assisting National Board, Inc.	Dental Assistant 8329
Certified Dental Assistant: Radiation Health & Safety Examination (RHS) One of three assessments leading to the complete Certified Dental Assistant credential (CDA)	Pass a knowledge-based exam consisting of 100 multiple-choice questions. The exam includes the intraoral and extraoral processes, mount/label, radiation safety-patient, radiation safety-operator, storage and disposal, quality assurance.	Dental Assisting National Board, Inc.	Dental Assistant 8329
Certified Electronics Technician Associate (CETA) The CETA program is designed for entry-level electronics students, apprentices, or technicians with two years or fewer combined electronics training and/or work experience. It certifies knowledge of basic electronics concepts and principles that form the foundation of all other industry specialty knowledge, skills, and abilities.	This exam is the basic portion of the full credit journey-level certification exam. This multiple-choice exam covers basic electricity, electronics, math, AC & DC circuits, transistors, and basic troubleshooting skills. The Associate level exam is a two-hour exam, and the applicant must receive a score of 75% to pass.	Electronics Technicians Association, International (ETA)	Choose one of the following: • Electronics Technology 8536/8537/8538 • Electronics Systems I 8416/8417 • Electronics Systems II 8412 • Electronics Systems III 8413
Certified Fiber Optics Installer Certification for technicians capable of fabricating, installing, troubleshooting, and maintaining fiber optic cable infrastructure	Complete an instructional unit consisting of the *Certified Fiber Optics Installer* curriculum from The Association of Communications & Electronics Schools, International. Pass an examination based on the following areas: particle and wave theories, optical fiber basics, connectors and components, splicing and cabling installation, optical signal concepts, troubleshooting, and hands-on skills, fiber optics connectorization, splicing, and testing.	The Association of Communications & Electronics Schools, International	Electricity 8533/8534/8535

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
Certified Internet Webmaster Associate Certification* Certification of basic skills and knowledge that an Internet professional is expected to understand and use. This is the first step in the Certified Internet Webmaster (CIW) program.	Pass a CIW Foundations exam (1DO-410). The exam covers Internet fundamentals, Web page authoring fundamentals, and networking fundamentals. Prosoft Learning accepts the iNet+ exam from CompTIA as a substitute for the CIW Foundations exam.	Prosoft Learning Corporation	Choose one of the following: • Design, Multimedia, and Web Technologies 6630 • Advanced Design, Multimedia, and Web Technologies 6631 • Computer Network Software Operations 6650 • Advanced Computer Network Software Operations 6651 • Programming 6640 • Advanced Programming 6641
Certified Internet Webmaster Associate Certification: Internet Business Foundations Examination* Certification of basic skills and knowledge that an Internet professional is expected to understand and use. This is a "pathway" examination leading to the full Certified Internet Webmaster Associate (CIW) certification.	Pass the Internet Business Foundations Examination (IBF Module). The exam covers basic concepts pertaining to: Information Technology and the Internet, Web Browsing, Multimedia on the Web, Databases and Web Search Engines, E-Mail and Personal Information Management, Internet Services and Tools, Internet Security, and IT Project Management.	Prosoft Learning Corporation	Choose one of the following: • Design, Multimedia, and Web Technologies 6630 • Advanced Design, Multimedia, and Web Technologies 6631 • Computer Network Software Operations 6650 • Advanced Computer Network Software Operations 6651 • Programming 6640 • Advanced Programming 6641
Certified Internet Webmaster Associate Certification: Site Development Foundations Examination* Certification of basic skills and knowledge that an Internet professional is expected to understand and use. This is a "pathway" examination leading to the full Certified Internet Webmaster Associate (CIW) certification.	Pass the Ste Development Foundations Examination (SDF Module). The exam covers basic concepts pertaining to: Introduction to Web Site Development, Markup Language and Site Development Essentials, XHTML Coding, Horizontal Rules and Graphical Elements, Hyperlinks, Tables, Web Forms, Image Techniques, Frame, GUI HTML Editors, Advanced Web Technologies, and E-Commerce Practices.	Prosoft Learning Corporation	Choose one of the following: • Design, Multimedia, and Web Technologies 6630 • Advanced Design, Multimedia, and Web Technologies 6631 • Computer Network Software Operations 6650 • Advanced Computer Network Software Operations 6651 • Programming 6640 • Advanced Programming 6641

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
Certified Internet Webmaster Associate Certification: Network Technology Foundations Examination* Certification of basic skills and knowledge that an Internet professional is expected to understand and use. This is a "pathway" examination leading to the full Certified Internet Webmaster Associate (CIW) certification.	Pass the Network Technology Foundations Examination (NTF Module). The exam covers basic concepts pertaining to: Introduction to Networking, TCP/IP Suite and Internet Addressing Introduction to TCP/IP, Internetworking Servers, Hardware and Operating System Maintenance.	Prosoft Learning Corporation	Choose one of the following: • Design, Multimedia, and Web Technologies 6630 • Advanced Design, Multimedia, and Web Technologies 6631 • Computer Network Software Operations 6650 • Advanced Computer Network Software Operations 6651 • Programming 6640 • Advanced Programming 6641
Certified Internet Webmaster Professional** Second certification step in the Certified Internet Webmaster (CIW) program of certifications; indicates that an individual has achieved the Certified Internet Webmaster Associate certification and has passed one additional job-role related exam in one of the CIW certification tracks.	Pass the foundation exam for the CIW Associate certification. Pass one job-role related exam in one of the CIW certification tracks.	Prosoft Learning Corporation	Choose one of the following: • Design, Multimedia, and Web Technologies 6630 • Advanced Design, Multimedia, and Web Technologies 6631 • Computer Network Software Operations 6650 • Advanced Computer Network Software Operations 6651 • Programming 6640 • Advanced Programming 6641
Certified Novell Administrator (CNA)** Certification of skills and knowledge for individuals who handle the day-to-day administration of an installed Novell networking product. The CNA is the first step in the Novell certification program.	Pass the Novell exam 050-677, Foundations of Novell Networking. This exam covers topics such as directory services, security, Web services, LAN/WAN technologies, and client/server management.	Novell	Choose one of the following: • Computer Network Software Operations 6650 • Advanced Computer Network Software Operations 6651
Certified Satellite Dish Installer Certification of skill in and knowledge necessary to install earth station, TV receive-only satellite dishes for consumer, business, and government use	Pass a test that includes antenna theory, amplifiers, satellite components, reflectors, feeds, wiring and switching, cabling, installation, interfacing, MATV and SMATV systems, fiber optics, and troubleshooting.	Electronics Technicians Association, International (ETA)	Choose one of the following: • Electronics Technology 8536/8537/ 8538 • Electricity 8533/8534/ 8535
Cisco CCNA Academy Certificate (CCNA:1) Certificate of successful completion of the CCNA 1: Networking Basics course of the CISCO Network Academy Program leading to full certification, Cisco Certified Network Associate (CCNA).	Pass an on-line assessment of competency in the following areas: introduction to networking, networking fundamentals, networking media, cable testing, cabling LANs and WANs, Ethernet fundamentals, Ethernet technologies, Ethernet switching, TCP/IP Protocol Suite, IP addressing, routing fundamentals and subnets, and TCP/IP transport and application layer.	Cisco Systems	Computer Networking Hardware Operations I 8542

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
Cisco CCNA Academy Certificate (CCNA: 2) A certificate of successful completion of the CCNA 2: Router and Routing Basics course of the CISCO Network Academy Program leading to full certification, Cisco Certified Network Associate (CCNA)	Pass an on-line assessment of competency in the following areas: WANs and routers, introduction to routers, configuring a router, learning about other devices, managing Cisco IOS software, routing and routing protocols, TCP/IP Suite error and control messages, basic router troubleshooting, intermediate TCP/IP, and access control lists (ACLs).	Cisco Systems	Computer Networking Hardware Operations II 8543
Cisco CCNA Academy Certificate (CCNA: 3) A certificate of successful completion of the CCNA 3: Switching Basics and Intermediate Routing course of the CISCO Network Academy Program leading to full certification, Cisco Certified Network Associate (CCNA)	Pass an on-line assessment that indicates competency in the following areas: introduction to classless routing, single-area OSPF, EIGRP, switching concepts, switches, switch configuration, spanning tree protocol, virtual LANs, and virtual trunking protocol.	Cisco Systems	Computer Networking Hardware Operations III 8544
Cisco CCNA Academy Certificate (CCNA: 4) A certificate of successful completion of the CCNA 4: WAN Technologies course of the CISCO Network Academy Program leading to full certification, Cisco Certified Network Associate (CCNA)	Pass an on-line assessment that indicates competency in the following areas: scaling IP addresses, WAN technologies, PPP, ISDN and DDR, frame relay, introduction to network administration, optical networking fundamentals.	Cisco Systems	Computer Networking Hardware Operations IV 8545
Cisco Certified Networking Associate (CCNA) Entry-level certification for workers who install, configure, and operate simple-routed LAN, routed WAN, and switched LAN, and ATM networks that use Cisco routers and switches	Complete the following courses as a part of the CISCO Network Academy Program: CCNA 1: Networking Basics, CCNA 2: Router, CCNA 3: Switching, CCNA 4: WAN Technologies. Pass one comprehensive CISCO certification exam, CCNA Exam 640-507, or two component exams of the CCNA certification.	Cisco Systems	Computer Networking Hardware Operations 8542/8543/8544/8545
Cisco CCNA Examination: Interconnecting Cisco Networking Devices Examination One of two examinations required for Cisco's entry-level certification for workers who install, configure, and operate simple-routed LAN, routed WAN, and switched LAN, and ATM networks that use Cisco routers and switches	Complete the following courses as a part of the CISCO Network Academy Program: CCNA 1: Networking Basics, CCNA 2: Router, CCNA 3: Switching, CCNA 4: WAN Technologies. Pass the CCNA certification examination: Cisco CCNA Examination: Interconnecting Cisco Networking Devices Examination (640-811)	Cisco Systems	Computer Networking Hardware Operations 8544/8545
Cisco CCNA Examination: Introduction to Cisco Networking Technologies Examination One of two examinations required for Cisco's entry-level certification for workers who install, configure, and operate simple-routed LAN, routed WAN, and switched LAN, and ATM networks that use Cisco routers and switches	Complete the following courses as a part of the CISCO Network Academy Program: CCNA 1: Networking Basics, CCNA 2: Router. Pass the CCNA certification examination: Cisco CCNA Examination: Introduction to Cisco Networking Technologies Examination (640-821)	Cisco Systems	Computer Networking Hardware Operations 8542/8543

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
Collision Repair Occupational competency assessment of skills and knowledge covered in a secondary level program in automotive collision repair	Pass the NOCTI knowledge-based exam, Collision Repair (2006), consisting of 186 test items. Test includes welding, sheet metal/panel alignment, plastic repairs, structural, glass, trim and hardware, estimating, safety/environmental, airbags/restraints, air conditioning systems and corrosion protection.	NOCTI	Choose one of the following: • Automotive Body Technology—Certified 8676/8677/8678 • Auto Body Repair—Non-Certified 8679/8680/8681
Collision Repair and Refinishing Technician (ASE) Certification of skill in automobile repair and refinishing. Examinations are considered "pathway" examinations to full ASE certification in a specialty area upon completion of required work experience.	Pass any <u>one</u> of four tests covering the following specialty areas in the ASE Collision Repair and Refinish Test Series: • Painting and Refinishing exam • Nonstructural Analysis and Damage Repair exam • Structural Analysis and Damage Repair exam • Electrical/Mechanical Components exam	National Automotive Technicians Education Foundation (NATEF)	Choose one of the following: • Automotive Body Technology—Certified 8676/8677/8678 • Auto Body Repair—Non-Certified 8679/8680/8681
Collision Repair and Refinishing Technology Occupational competency assessment of skills and knowledge covered in a secondary level program in collision repair and refinishing technology	Pass the NOCTI knowledge-based exam, Collision Repair and Refinishing Technology (1083), which includes 198 test items. Test includes welding, sheet metal repair/panel alignment, plastic repairs, structural, glass, trim and hardware, and detailing, estimating, electronic, safety/environmental, air conditioning, corrosion and corrosion protection, and refinishing.	NOCTI	Choose one of the following: • Automotive Body Technology—Certified 8676/8677/8678 • Auto Body Repair—Non-Certified 8679/8680/8681
Commercial Pesticide Applicator Certification Examinations Certification examinations required for applying commercial pesticide in any one of 20 application categories. Assessments are considered to be "pathway" examinations leading toward full certification upon reaching 18 years of age.	Pass a Core Examination as well as <u>one</u> examination in any one of 20 specialty areas in the Commercial Applicator Examination Category. Examples: Agricultural Pest Control—Plant, Agricultural Pest Control—Animal, General Pest Control, Forest Pest Control, Seed Treatment	Virginia Department of Agriculture and Consumer Services	Choose one of the following: • Agricultural Production Technology 8010 • Agricultural Production Management 8012 • Introduction to Natural Resources 8040 • Natural Resources Business Management 8044 • Landscaping 8036 • Turf Establishment and Maintenance 8051 • Advanced Turf Grass Applications 8054 • Horticulture Sciences 8034 • Greenhouse Plant Production and Management 8035 • Floriculture 8038 • Forestry, Wildlife, and Soil Management 8042

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
Commercial Air Conditioning Certification Certification that addresses unique issues involved in the service and maintenance of commercial air conditioning systems. Commer-AC technicians are faced with a variety of equipment and systems. All A/C equipment has certain components and functions that are common to all refrigeration and A/C devices; however, commercial buildings may experience high occupancy and contain equipment leading to indoor air quality (IAQ) concerns.	Pass a written exam focusing on the following: commercial evaporators, commercial condensing units, head pressure controls, charging commercial systems, air distribution, fresh air intake and exchange, filtration (HEPA filters, electronic air filters, activated charcoal air purifiers), generators, humidity control, control of indoor contamination, and duct cleaning.	HVAC Excellence	Heating, Ventilation, Air Conditioning, and Refrigeration 8503/8504/8505
Commercial Foods Assessment Occupational competency assessment of skills and knowledge related to commercial foods operations	Pass the NOCTI knowledge-based exam (2020) consisting of 182 test items. Test includes food service overview, sanitation, safety, equipment, production techniques, recipes, purchasing and management skills, menu planning and service.	National Occupational Competency Testing Institute (NOCTI)	Choose one of the following: • Culinary Arts I 8275 • Culinary Arts II 8276 • Culinary Arts 8521/8522/8523
Commercial Refrigeration Certification Certification for technicians servicing or maintaining commercial or industrial refrigeration systems. The commercial refrigeration technician is faced with a variety of equipment and an equal variety of trouble-shooting and service situations. Electrical and Air Conditioning Certifications are prerequisite to the Commercial Refrigeration Exam.	Pass a written exam focusing on the following: refrigeration components, commercial evaporators, commercial condensing units (head pressure controls), charging commercial systems, refrigerant controls, ice maker controls, defrost timers, pressure regulating values, grocery (reach-in) cabinets, walk-in cabinets, display cases, frozen food storage, dispensing freezers, and industrial applications.	HVAC Excellence	Heating, Ventilation, Air Conditioning, and Refrigeration 8503/8504/8505
Construction Electricity Assessment Occupational competency assessment of skills and knowledge covered in an instructional program in construction electricity	Pass the NOCTI knowledge-based exam (1024) consisting of 186 test items. Test includes: safety, tools, and equipment, NEC/blueprints/planning/ layout, electronics, alternating current (basic theory, circuits, three-phase), transformers, AC motors and starters, branch circuits, wiring methods, lighting, heating and air conditioning, and low voltage.	National Occupational Competency Testing Institute (NOCTI)	Electricity 8533/8534/8535
Construction Masonry—Blocklaying Assessment Occupational competency assessment of skills and knowledge covered in an instructional program in masonry-blocklaying	Pass the NOCTI knowledge-based exam (2025) consisting of 187 test items. Test includes hand and power tools, safety, materials and methods, blueprints and specifications, masonry layout and applications, fireplaces and chimneys, masonry structure maintenance, scaffolding, trade appreciation and human relations, arches, steps, patios and pattern bonds and specialty area of blocklaying.	National Occupational Competency Testing Institute (NOCTI)	Masonry 8512/8513/8514

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
Construction Masonry—Bricklaying Assessment Occupational competency assessment of skills and knowledge covered in an instructional program in masonry-bricklaying	Pass the NOCTI knowledge-based exam (2125) consisting of 187 test items. Test includes hand and power tools, safety, materials and methods, blueprints and specifications, masonry layout and applications, fireplaces and chimneys, masonry structure maintenance, scaffolding, trade appreciation and human relations, arches, steps, patios and pattern bonds and specialty area of bricklaying.	National Occupational Competency Testing Institute (NOCTI)	Masonry 8512/8513/8514
Copper Based Cabling Certification A certification for technicians capable of fabricating, installing, troubleshooting, and maintaining copper cable infrastructure for high speed data services, voice, video, and security information systems. Instructor must be RBT System certified before students can receive certification.	• Complete an instructional unit consisting of an RBT Copper Based Network Cabling Certification module. • Pass an examination covering the following areas: safety, hardware, twisted pair cabling and coaxial cabling, cable testing, cabling standards, network cabling installation, and residential and voice cabling.	RBT Systems, Inc.	Electricity 8533/8534/8535
Core: Introductory Craft Skills, National Construction Career Test Certification of knowledge and skills defined as *construction fundamentals* for all building and construction trade areas. The certification exam will be based upon the NCCER *Contren Learning Series*, "Core Curriculum, Introductory Craft Skills."	Pass an exam that covers the following: basic safety, employability and communication skills, introduction to construction math, introduction to hand tools, introduction to power tools, introduction to blueprints, and basic rigging.	National Center for Construction Education & Research (NCCER)	Choose one of the following: • Building Trades 8515/8516/8517 • Carpentry 8601/8602/8603 • Cabinetmaking 8604/8605/8606 • Electricity 8533/8534/8535 • HVACR 8503/8504/8505 • Masonry 8512/8513/8514 • Plumbing 8551/8552/8553 • Welding 8672/8673/8674
Cosmetology Virginia state license to practice the care and styling of human hair, wigs, and hairpieces	• Complete the training required by the licensing board as defined in the Code of Virginia. • Pass the written and performance elements of Virginia licensing examination.	Virginia Board of Barbers and Cosmetology (Department of Professional & Occupational Regulations)	Cosmetology 8527/8528/8529
Cosmetology Occupational competency assessment of skills and knowledge covered in a secondary level program in cosmetology	Pass the NOCTI knowledge-based exam, Cosmetology (1082), consisting of 170 test items. Test includes salon management/accounting; shampooing, conditioning, cutting, styling, coloring, permanent waving, and relax-ing hair; skin care, wig services, cleaning and sterilizing equipment, and composition of hair, skin, and nails.	National Occupational Competency Testing Institute (NOCTI)	Cosmetology 8527/8528/8529

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
Criminal Justice Assessment Occupational competency assessment of skills and knowledge covered in a secondary level program in introductory criminal justice/law enforcement.	Pass the NOCTI knowledge-based exam, Criminal Justice (2081), consisting of 175 test items. Test includes crime scene handling, use of force continuum, criminal law and procedures, health issues, police concepts and skills, corrections concepts and skills, court system, communication, security, and understanding and working with special populations.	National Occupational Competency Testing Institute (NOCTI)	Criminal Justice 8702/8703/8704
Customer Support Specialist Certification* Certification of knowledge of customer service, skills required, and readiness to work in the support center industry. A candidate who passes the certification exam is expected to understand the role of the support center professional, best practices for communications, customer service, teamwork, ethics, support center processes, and terminology.	Pass a one-hour, 40-question exam covering the following areas: customer support profession, communications, customer service, problem solving, teamwork, ethics, technical processes, and technology and infrastructure.	Help Desk Institute	Choose one of the following • Computer Network Software Operations 6650 • Advanced Computer Network Software Operations 6651
Data Cabling Installer Certification Certification of skills and knowledge required of a data cabling installer	Pass an examination that measures knowledge in the following technical areas: basic electricity, data communications basics, definitions, symbols and abbreviations, cable construction, cable performance characteristics, cabling standards, basic network topologies, basic network architectures, NEC and UL requirements, cabling system components, DCIC installation tools, connectors and outlets, cabling system design, cabling installation, connector installation, cabling testing and certification, cabling troubleshooting, and documentation.	Electronics Technicians Association, International (ETA)	Electricity 8533/8534/8535
Dental Assisting Assessment Occupational competency assessment of skills and knowledge covered in a dental assisting instructional program	Pass the NOCTI knowledge-based exam (2026) consisting of 183 test items. Test includes communication, infection control and hazards management, assisting with clinical procedures, performing diagnostic measures and performing clerical functions.	National Occupational Competency Testing Institute (NOCTI)	Dental Assistant 8329
Diesel Engine Mechanics Assessment Occupational competency assessment of skills and knowledge covered in a diesel engine technology program.	Pass the NOCTI knowledge-based exam (2027) consisting of 164 test items. Test includes safety, shop equipment, cooling system, lubricating system, intake and exhaust systems, diesel fuel system, cylinder heads, electrical systems, flywheel, clutch and transmission, general shop practices, air conditioning, and engine troubleshooting, disassembly, rebuilding, testing, and operation.	National Occupational Competency Testing Institute (NOCTI)	Choose one of the following: • Diesel Equipment Technology I 8613 • Diesel Equipment Technology II 8614 • Diesel Equipment Technology III 8615

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
Drafter Certification A certification that allows drafters to demonstrate drafting concepts and nationally recognized standards and practices. The certification exam does not require specific knowledge of design and does not cover software specific computer aided drafting (CAD).	Pass an exam that covers drafting concepts as well as nationally recognized standards and practices.	American Design Drafting Association	Drafting 8530/8531/8532
Early Childhood Care & Education Assessment Occupational competency assessment of skills and knowledge related to instruction in the early childhood care and education area	Pass the NOCTI knowledge-based exam (2016) consisting of 193 test items. Test includes program management, health and safety, intellectual (cognitive) development. Physical development, social and emotional development, positive adult/child relationships and guidance, positive relationships with families, professionalism, language development and communication, creativity, culturally relevant care and education, observation and documentation of learning, inclusion of children with special needs, and curriculum planning.	National Occupational Competency Testing Institute (NOCTI)	Choose one of the following: • Early Childhood Education I 8285 • Early Childhood Education II 8286
Electrical Principles: Residential Construction Academy Examination Examination of skills and knowledge covered in the course materials, "Residential Construction Academy: Electrical Principles," Thomson Delmar Learning in Partnership with the Home Builders Institute	Pass an online assessment that measures important topics that residential electricians need. The examination covers the following: basic electricity and electrical theory; safety; electrical quantities and Ohm's Law; resistors; series, parallel and combination circuits; measuring instruments; using wire tables and determining conductor sizes; alternating current; magnetic induction; inductance in alternating current schedules; resistance-inductive series circuits; resistive-inductive parallel circuits; capacitors; single-phase transformers; and single-phase motors.	Thomson Delmar Learning/Home Builders Institute	Choose one of the following: • Electricity 8533/8534/8535 • Building Trades 8515/8516/8517
Electrical Construction Assessment Occupational competency assessment of skills and knowledge related to an electrical construction program.	Pass the NOCTI knowledge-based exam (3030) consisting of 185 test items. Test includes general information; safety; meters, measures, and testing; identification of tools, materials, and components; National Electric Code; blueprints, drawings, diagrams, and symbols; planning; layout and estimating; AC theory; conductors and magnetic theory; electronics; DC; basic electric and electron theories; low voltage systems; wiring; circuits, and installation; raceway and conduit bending; transformers; motors; motor control circuits and PLCs; lighting; and basic computer skills.	National Occupational Competency Testing Institute (NOCTI)	Choose one of the following: • Electricity 8533/8534/8535 • Building Trades 8515/8516/8517

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
Electrical Certification Certification for the HVAC technician who installs, services, troubleshoots, and repairs a variety of electrical circuits and components in today's HVAC systems. Because the vast majority of service calls involve electrical repairs, HVAC Excellence designates Electrical Certification the prerequisite for all other certifications in its program.	Pass a written exam focusing on circuit fundamentals, electrical materials, magnetism, circuit protection, automatic controls components and applications, troubleshooting basic controls, types of electric motors, application of motors, motor controls, and troubleshooting electric motors.	HVAC Excellence	Heating, Ventilation, Air Conditioning, and Refrigeration 8503/8504/8505
Electric Heat Certification Certification for a technician who services electric heat systems or heat pump systems. It demonstrates competence in all aspects of service and troubleshooting electric heat systems. Electric heat is commonly used as a supplemental heat supply for heat pump systems; hence, it is an excellent supporting certification. Electrical Certification is prerequisite to the Electric Heat exam.	Pass a written exam focusing on the following: principles of electric resistance heating, central forced air electric furnaces, thermostats, controlling multiple stages, contractors for electric furnaces, wiring diagrams, fan motor circuits, and airflow.	HVAC Excellence	Heating, Ventilation, Air Conditioning, and Refrigeration 8503/8504/8505
Electrical, National Construction Career Test Certification of knowledge and skills defined as Level 1 competency in the residential and commercial/industrial electrical trade area. The certification exam will be based upon the NCCER *Contren Learning Series* standardized curriculum.	Pass an exam that covers the following: electrical safety; hand bending; fasteners and anchors; electrical theory one; electrical theory two; electrical test equipment; introduction to the national electrical code; raceways, boxes, and fittings; conductors; introduction to electrical blueprints; wiring: commercial and industrial; wiring: residential.	National Center for Construction Education & Research (NCCER)	Choose one of the following: • Electricity 8533/8534/8535 • Building Trades 8515/8516/8517
Electronic Technology Assessment Occupational competency assessment of skills and knowledge covered in a secondary level program in electronic technology	Pass the NOCTI knowledge-based exam, Electronic Technology (3035), consisting of 192 items. Test includes safety practices, hand tools, alternate current (AC) circuit analysis, communications, direct current (DC) circuit analysis, solid-state device analysis, basic logic function analysis, electronic device applications, analog circuit analysis, digital electronic circuit analysis, fabrication, inspection, and soldering.	National Occupational Competency Testing Institute (NOCTI)	Choose one of the following: • Electronics Systems I 8416 • Electronics Systems II 8412 • Electronics Systems III 8412 • Electronics Technology 8536/8537/8538
Emergency Medical Technician Certification for emergency medical technician (EMT) or first responder	Pass the written and practical elements of a test focusing on emergency treatment of victims of accident, injury, or illness.	Department of Health, Office of Emergency Medical Services	Emergency Medical Technology 8334

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
EPA Technician Certification (Exams: Core, I, II, or III) Certification that is required by Section 608 of the Clean Air Act for anyone who maintains, services, repairs, or disposes of appliances which contain refrigerants with CFCs or HCFCs. Certification must be administered by an EPA-approved testing organization (e.g., Air Conditioning and Refrigeration Institute—ARI).	Pass testing required for the mandatory EPA Technician Certification. Includes a complete review of the final EPA regulations implementing Section 608 of Clean Air Act. Recovery, recycling, reclamation, and proper handling of refrigerants and other information needed.	Environmental Protection Agency (Authorized Testing Entity)	• Heating, Ventilation, Air Conditioning, and Refrigeration 8503/8504/8505 • Industrial Maintenance Technology 8575/8576/8577
Fiber Optic Network Cabling Certification A certification for technicians capable of fabricating, installing, troubleshooting, and maintaining fiber optic cable infrastructure for high speed data services (broadband, LAN, gigabit ethernet, VoIP, xDSL and ATM), voice, video, and security information systems. Instructor must be RBT System-certified before students can receive certification.	• Complete an instructional unit consisting of an RBT Fiber Optic Network Cabling Certification module. • Pass an examination covering the following areas: fiber optic fundamentals, history of fiber optics, safety, fiber optic tools, fiber optic concepts, cable assemblies, cabling system design, cabling system installation, connecting methods and devices, connecting hardware and outlets, testing, troubleshooting, and standards.	RBT Systems, Inc.	Electricity 8533/8534/8535
Fiber Optics Installer Certification Entry-level certification for fiber optics installers. Program establishes and benchmarks the basic knowledge and skills needed to install fiber optics communications cabling safely and competently.	• Attend an ETA-approved Fiber Optics Installer School (or program). • Successfully complete a hands-on demonstration of splicing and connectorization ability as it applies to fiber optics cable. • Pass written FOIC certification examination.	Electronics Technicians Association, International (ETA)	Electricity 8533/8534/8535
Firefighter Level I Certification Certification of skills and knowledge obtained in an entry-level course for new firefighters	Pass an end-of-course examination certifying skills and knowledge learned in an entry-level course for new firefighters. Course is based on National Fire Protection Agency S1001 standard and consists of a combination of classroom study, fire-ground scenarios, and modular practical experiences that will prepare the firefighter to carry out most fire-ground functions under the direct supervision of an experienced firefighter.	Virginia Department of Fire Programs	Firefighting 8705/8706/8707
Floriculture-Greenhouse Assessment Occupational competency assessment of skills and knowledge related to instruction in floriculture-greenhouse operation	Pass the NOCTI knowledge-based exam (3949) consisting of 183 test items. Test includes basic floral design, intermediate floral design, advanced floral design, small business, greenhouse operations, plant sciences, and soil sciences.	National Occupational Competency Testing Institute (NOCTI)	Choose one of the following: • Horticulture Sciences 8034 • Floriculture 8038

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
Food Production, Management, and Services Assessment Occupational competency assessment of skills and knowledge related to basic culinary arts instruction	Pass the NOCTI knowledge-based exam (2036) consisting of 185 test items. Test includes recipes; large and small equipment; sanitation and safety; preparation of cold food, vegetables, starches and proteins, bakery, desserts, pastries, stocks, sauces, soups, meats, poultry, seafood, and breakfast; receiving and storage; nutritional values; customer service and management; and employment skills.	National Occupational Competency Testing Institute (NOCTI)	Choose one of the following: • Culinary Arts I 8275 • Culinary Arts II 8276 • Culinary Arts 8521/8522/8523
Forestry Products & Processing Assessment Occupational competency assessment of skills and knowledge covered in courses such as Introduction to Natural Resources and Forestry, Wildlife, and Soil Management	Pass the NOCTI knowledge-based exam (2037) consisting of 157 test items. Test includes general safety, logging/harvesting, tree identification, forest protection, silviculture, forest management, business management, wildlife, surveying, chain saw, sawmilling, diesel—hydraulics, employability skills, forest ecology, and timber cruising.	National Occupational Competency Testing Institute (NOCTI)	Choose one of the following: • Introduction to Natural Resources 8040 • Forestry, Wildlife, and Soil Management 8042
Fundamental Concepts of Business and Marketing Certificate Certificate awarded for competency in business concepts and skills (marketing emphasis) based on business-derived standards and for knowledge of specific business/marketing functions (e.g., selling or industries such as retail or hospitality)	Pass a knowledge-based exam consisting of 100 multiple-choice test items. Test includes business administration, communications, distribution, economics, financing, marketing-information management, product management, professional development, promotion, and selling.	ASK Institute (DECA/MarkED)	Choose one of the following: • Marketing 8120/8121 • Adv. Marketing 8130/8131 • Fashion Marketing 8140/8141 • Adv. Fashion Marketing 8145/8146 • Hotel/Motel Marketing 8160/8161 • Adv. Hotel/Motel Marketing 8162/8163 • International Marketing 8135 • Adv. International Marketing 8136 • Internet Marketing 8125 • Marketing Management 8132 • Sports, Entertainment, and Recreation Marketing 8175/8176 • Adv. Sports, Entertainment and Recreation Marketing 8175 • Travel/Tourism Marketing 8165/8166 • Adv. Travel/Tourism Marketing 8167/8168 • Financial Services Marketing 8180/8181

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
Fundamentals of Wireless LANs Certificate Certification of introductory skills and knowledge of wireless local area networks	Pass an on-line end-of-course exam for Cisco's sponsored course, Fundamentals of Wireless LANs. The exam focuses on the design, planning, implementation, operation, and troubleshooting of wireless networks.	Cisco Systems	Choose one of the following: • Computer Systems Technology 8622/8623/8624 • Computer Network Software Operations 6650 • Advanced Computer Network Software Operations 6651
Gas Heat Certification Indicates that a technician possesses an in-depth knowledge of all types of gas heat units and their control systems. Any technician who installs, services, or maintains gas heat systems should be certified. Electrical Certification is prerequisite to the Gas Heat exam.	Pass a written exam focusing on the following: types of furnaces, gas fuels (natural gas, LP gas), combustion, gas valve, automatic combination gas valve, manifold, orifice, burners, pilots, gas furnace wiring diagrams, and troubleshooting techniques.	HVAC Excellence	Heating, Ventilation, Air Conditioning, and Refrigeration 8503/8504/8505
General Drafting and Design Assessment Occupational competency assessment of skills and knowledge covered in a secondary level program in general drafting and design	Pass the NOCTI knowledge-based exam, General Drafting and Design (2038), consisting of 175 test items. Test includes basic drawing and dimensioning skills, job entry skills, geometric construction, applied mathematics, drawing techniques and supplementary view, dimensioning skills—computer-aided drafting (CAD), dimensioning skills—mechanical drafting, mechanical drafting and shop manufacturing processes, planning and performing architectural activities/terms/symbols, architectural floor plans, architectural elevations and sections, and supplemental drafting activities.	National Occupational Competency Testing Institute (NOCTI)	Drafting 8530/8531/8532
Graphic Communications Technology Assessment Occupational competency assessment of skills and knowledge covered in an instructional program for graphics arts, printing, and related digital media	Pass the NOCTI knowledge-based exam (4042) consisting of 190 test items. Test includes introduction to printing, electronic imaging and copy presentation, image assembly and platemaking, duplicator/press operations, finishing processes, and electronic publishing.	National Occupational Competency Testing Institute (NOCTI)	Graphic Imaging Technology 8660/8661/8662
Graymark Cable Installation Certification Certification provided to students who have successfully trained on the Graymark Cabling Tech program as taught by a certified instructor. The Cabling Tech program covers all topics required by the industry standard BICSI Level 1 certification plus cable installation such as phone, cable television, and inside and outside installation cable.	• Complete the Graymark Cabling Tech program taught by a teacher certified to teach that curriculum. • Pass an exit exam related to the Graymark Cabling Tech program competencies.	Graymark International	Electricity 8533/8534/8535

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
Greenhouse Operators Certification Program Certification of skills and knowledge relating to greenhouse production and marketing	Pass a knowledge-based exam based on curriculum provided by the Virginia Flower Growers Association for greenhouse operations.	Southeast Greenhouse Growers Association/Virginia Flower Growers Association	Choose one of the following: • Horticulture Sciences 8134 • Floral Design I 8055 • Floral Design II 8056 • Floriculture II 8038 • Greenhouse Plant Production and Management 8035 • Specialty Horticulture Arts 8037
Heating, Electrical, Air Conditioning Technology (HEAT) Examination A combined assessment covering heating, electrical, and air conditioning technology. This examination is designed specifically for secondary HVAC programs.	Pass a "student outcome assessment" (HEAT) examination designed for secondary HVAC programs* This 100 question examination includes equipment installation and service; knowledge of electric heat systems and components; knowledge of heating system and components; safety, theory and application; troubleshooting and problem solving. *There are two versions of the HEAT assessment, one with questions covering gas heat, and the other with questions on oil heat.	HVAC Excellence	Heating, Ventilation, Air Conditioning, and Refrigeration 8503/8504/8505
Health Assisting Assessment Occupational competency assessment of skills and knowledge covered in basic health assisting instruction	Pass the NOCTI knowledge-based exam (2044) consisting of 123 test items. Test includes medical terminology, observation and communication, employment skills, and health assisting skills.	National Occupational Competency Testing Institute (NOCTI)	Choose one of the following: • Health Assistant II 8332 • Nurse Aide II 8360/8362 • Practical Nursing II 8358
Heat Pump Certification Certification of competence in all areas of service and troubleshooting air-to-air heat pump systems. Any technician responsible for the installation, service and maintenance of air-to-air heat pump systems should be Heat Pump Certified. Electrical and Air Conditioning Certifications are prerequisites for this test.	Pass a written exam focusing on the following: theory, operation and components of a reverse cycle heat pump, four-way valves, heat sources for heat pumps, auxiliary heat for heat pumps, heat pump efficiency ratings, co-efficiency of performance, control sequences, maintenance procedures, and safety.	HVAC Excellence	Heating, Ventilation, Air Conditioning, and Refrigeration 8503/8504/8505
Home Health Aide Assessment Occupational competency assessment of skills and knowledge covered in home health aide instruction	Pass the NOCTI knowledge-based exam (2048) consisting of 131 test items. Test includes first aid, abbreviations, vocabulary and communication, employability skills, client care/medications, safety, nutrition and elimination, positioning, client transfer, personal care, home maintenance management, and client rights.	National Occupational Competency Testing Institute (NOCTI)	Choose one of the following: • Health Assistant II 8332 • Nurse Aide II 8360/8362 • Practical Nursing II 8358

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
Horticulture—Floriculture Assessment Occupational competency assessment of skills and knowledge covered in basic floriculture instruction	Pass the NOCTI knowledge-based exam (2049) consisting of 135 test items. Test includes general knowledge, pest management, fundamentals of irrigation, basic nursery/greenhouse skills, horticulture retailing, greenhouse/floriculture, floral industry, and interiorscaping.	National Occupational Competency Testing Institute (NOCTI)	Choose one of the following: • Horticulture Sciences 8034 • Floriculture 8038
Horticulture—Landscaping Assessment Occupational competency assessment of skills and knowledge covered in basic landscaping instruction	Pass the NOCTI knowledge-based exam (2149) consisting of 131 test items. Test includes general knowledge, pest management, fundamentals of irrigation, basic nursery/greenhouse skills, horticulture retail, landscape construction, landscape maintenance, golf course maintenance, and arboriculture.	National Occupational Competency Testing Institute (NOCTI)	Choose one of the following: • Horticulture Sciences 8034 • Landscaping 8036
Horticulture—Olericulture Assessment Occupational competency assessment of skills and knowledge covered in basic greenhouse plant production and management as relates to fruits and vegetables	Pass the NOCTI knowledge-based exam (2249) consisting of 124 test items. Test includes general knowledge, pest management, fundamentals of irrigation, basic nursery/greenhouse skills, horticulture retailing, and fruits and vegetables.	National Occupational Competency Testing Institute (NOCTI)	Choose one of the following: • Horticulture Sciences 8034 • Greenhouse Plant Production and Management 8037
Hospitality Management—Food and Beverage Option Assessment Occupational competency assessment of skills and knowledge related to hospitality industry management with emphasis on food and beverage operations	Pass the NOCTI knowledge-based exam (1079) consisting of 159 test items. Test includes introduction to hospitality management, guest relations/concierge, understanding hospitality marketing, the marketing department, marketing to organizations, safety on the job, cashier, travel and tourism, restaurant management, food and beverage service, and legal and ethical responsibilities.	National Occupational Competency Testing Institute (NOCTI)	Choose one of the following: • Advanced Hotel/Motel Marketing 8162/8163 • Hospitality Services I 8202 • Hospitality Services II 8203
Hospitality Management—Lodging Option Assessment Occupational competency assessment of skills and knowledge related to hospitality industry management with emphasis on lodging operations	Pass the NOCTI knowledge-based exam (1080) consisting of 163 test items. Test includes introduction to hospitality management, front office organization, rooms, bedding and rates, the reservation function, guest relations/concierge, understanding hospitality marketing, the marketing department, marketing to organizations, safety on the job, cashier, travel and tourism, and legal and ethical responsibilities.	National Occupational Competency Testing Institute (NOCTI)	Choose one of the following: • Advanced Hotel/Motel Marketing 8162/ 8163 • Hospitality Services I 8202 • Hospitality Services II 8203

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
House Wiring: Residential Construction Academy Examination Examination of skills and knowledge covered in the course materials, "Residential Construction Academy: House Wiring," Thomson Delmar Learning in Partnership with the Home Builders Institute	Pass an online assessment that measures all areas of residential wiring that are required of an entry-level electrician. The examination covers the following: preparing and planning a residential wiring job; safety; hardware, materials, measurement instruments used; residential service entrances; electrical system rough-in; electrical box and enclosure installation; cable and raceway installation; switching and branch circuit installation; video, voice and data wiring installation; residential system trim-out; lighting fixture and device installation; service panel trim-out; maintaining, troubleshooting, and repairing residential electrical wiring systems.	Thomson Delmar Learning/ Home Builders Institute	Choose one of the following: • Electricity 8533/8534/8535 • Building Trades 8515/8516/8517
HVAC: Residential Construction Academy Examination Examination of skills and knowledge covered in the course materials, "Residential Construction Academy: HVAC," Thomson Delmar Learning in Partnership with the Home Builders Institute	Pass an online assessment that measures the skills and knowledge necessary for the aspiring technician who will be involved in the installation, startup, and service of residential air conditioning and heating systems. The examination covers the following: introduction to matter, energy and heat basics; refrigeration process; installation safety; unit location and the air distribution system; system connections; system evacuation, startup and service; mechanical and electrical troubleshooting; refrigerant management; basic electricity motors and automatic controls; indoor air quality; electric, gas, oil, hydronic and geothermal heating.	Thomson Delmar Learning/ Home Builders Institute	Heating, Ventilation, Air Conditioning, and Refrigeration 8503/8504/8505
HVAC, National Construction Career Test Certification of knowledge and skills defined as Level 1 competency in the heating, ventilation, and air conditioning area. The certification exam will be based upon the NCCER *Contren Learning Series* standardized curriculum.	Pass an exam that covers basic principles and skills related to the residential and light commercial heating and air conditioning systems.	National Center for Construction Education & Research (NCCER)	Heating, Ventilation, Air Conditioning, and Refrigeration 8503/8504/8505
IC³ (Internet and Computing Core Certification)* A global, validated, standards-based training and certification program for basic computing and Internet literacy. It validates the knowledge and skills required for basic use of computer hardware, software, networks, and the Internet.	Pass three individual examinations in the following areas: • Computing Fundamentals • Key Applications • Living On-line	Certiport	Choose any 36-week Business and Information Technology course except Keyboarding, Keyboarding Applications, Digital Input Technologies, or Notetaking,

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
iNet+ Certification* Certification of essential networking and Internet knowledge and skills of entry-level Internet and e-commerce technical professionals who are responsible for participating in the maintenance of Internet, Intranet, and Extranet infrastructure and services as well as the development of Web-based applications	Pass a written exam that requires knowledge in six domain areas: Internet Basics & Clients, Development, Networking, Internet Security, and Business Concepts.	CompTIA	Choose one of the following: • Computer Network Software Operations 6650 • Advanced Computer Network Software Operations 6651 • Design, Multimedia, and Web Technologies 6630 • Advanced Design, Multimedia, and Web Technologies 6631
Industrial Maintenance Mechanic Assessment Occupational competency assessment of skills and knowledge covered in a secondary level program in industrial maintenance technology	Pass the NOCTI knowledge-based exam, Industrial Maintenance Mechanic Assessment (1074), consisting of 146 test items. Test includes digital fundamentals, hydraulics/pneumatics, motor controls/mechanism drives, programmable controls, and industrial robotics systems.	National Occupational Competency Testing Institute (NOCTI)	Industrial Maintenance Technology 8575/8576/8577
Installer Core Certification (HVAC-NATE) The Core NATE Installer exam is the first certification required before a technician chooses a more advanced specialty installation exam for full certification (passing of core exam and specialty area exam)	Pass a 50-question core exam that covers safety, tools, soft skills, principles of heat transfer and total comfort, and electrical questions.	North American Technician Excellence, Inc. (NATE)	Heating, Ventilation, Air Conditioning, and Refrigeration 8503/8504/8505
International Computer Driving License (ICDL)* Computer literacy certification stressing proficiency in seven broad areas	Pass individual examinations in the following seven areas: • Basic Concepts of IT • Using a Computer and Managing Files • Word Processing • Spreadsheets • Databases • Presentations • Information and Communication	ICDL US	Choose any 36-week Business and Information Technology course except Keyboarding, Keyboarding Applications, Digital Input Technologies, or Notetaking.

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
IT Essentials Certificate, Level 1 End-of-course certificate awarded upon successful completion of the curriculum unit, IT Essentials Level 1: PC Hardware and Software, from Cisco Systems. It provides stepping-stone preparation to the A+ certification from CompTIA.	Pass one examination covering the following topics: information technology basics, how computers work, assembling a computer, operating systems fundamentals, Windows 9x operating systems, multimedia capabilities, Windows NT/2000/XP operating systems, advanced hardware fundamentals for servers, networking fundamentals, printers and printing, preventive maintenance, troubleshooting PC hardware, and troubleshooting software.	Cisco Systems	Choose one of the following: • Computer Network Software Operations 6650 • Advanced Computer Network Software Operations 6651 • Computer Control and Automation 8421 • Information Technology Fundamentals 6670 • Information Technology in Production Systems 8496 • Computer Systems Technology 8622/8623/8624
IT Essentials Certificate, Level 2 End-of-course certificate awarded upon successful completion of the curriculum unit, IT Essentials Level 2: Network Operating Systems, from Cisco Systems. It provides a stepping-stone to the certifications such as Network+, Server+, and Linux+ from CompTIA.	Pass one examination covering the following topics: operating system fundamentals, introduction to networking, physical components of a network, TCP/IP networking, overview of network services, introduction to network operating systems, installation and boot process overview, Windows 2000 Professional, Linux installation procedures, Linux, advanced NOS administration, installing and maintaining hardware in a Linux environment, troubleshooting the operating system, and network security.	Cisco Systems	Choose one of the following: • Computer Network Software Operations 6650 • Advanced Computer Network Software Operations 6651 • Computer Networking Hardware Operations IV 8545
Java Programming Certificate End-of-course certificate awarded upon successful completion of the course, Fundamentals of Java Programming, from Cisco Systems. It provides a steppingstone to the Sun Certified Programmer for Java certification.	Pass an end-of-course online exam which tests the following: conceptual understanding of object oriented programming, Java languages, object- oriented technologies to solve business problems, language fundamentals and Java language API, and creating classes, objects, and applications.	Cisco Systems	Choose one of the following: • Advanced Database Design and Management 6661 • Advanced Programming 6641
Light Commercial Heating & Air Conditioning Industry Competency Exam (ICE) offered by ARI. It measures industry-wide standards of basic competency for entry-level (one year or less) technicians in the area of light commercial heating and air conditioning (6- to 20-ton systems).	Pass an exam that contains 100 multiple-choice questions covering the ARI curriculum guide for Light Commercial Heating & Air Conditioning.	Air Conditioning and Refrigeration Institute (ARI)	Heating, Ventilation, Air Conditioning, and Refrigeration 8503/8504/8505

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
Linux+ Certification Program Benchmark of basic knowledge and skills pertaining to the Linux computer operating system	Pass one examination consisting of approximately 95 multiple-choice questions, which tests basic knowledge of the work environment and typical job tasks and problems encountered by an entry-level Linux professional.	CompTIA	Choose one of the following: • Computer Network Software Operations 6650 • Advanced Computer Network Software Operations 6651
Lodging Management Program Certification, Level 1 Certification indicating that student has studied and experienced career opportunities in the lodging and food service industry, has developed skills needed in the operation of a lodging property, and has passed the Level 1 exam	Pass an exam after completing Level 1 of the AH&LA Lodging Management Program. Exam items include overview of lodging management, the front office, and housekeeping.	American Hotel and Lodging Association (AH&LA)	Choose one of the following: • Hotel/Motel Marketing 8160/8161 • Hospitality Services I 8202
Lodging Management Program Certification, Level 2 Certification indicating that student has studied and experienced career opportunities in the lodging and food service industry, has developed skills needed in the operation of a lodging property, and has passed the Level 2 exam	Pass an exam after completing Level 2 of the AH&LA Lodging Management Program. Exam items include leadership and management, marketing and sales, food and beverage service.	American Hotel and Lodging Association (AH&LA)	Choose one of the following: • Advanced Hotel/Motel Marketing 8162/8163 • Hospitality Services II 8203
Machining Skills—Level 1 Certification of essential knowledge and skills for entry-level machinists in any one of seven distinct Machining Level 1 skill areas	Each of seven credentials that can be earned requires successful completion of a performance requirement and a related theory exam. Each credential involves a different written exam with the exception of Turning; the Turning exam needs to be taken only once for both Turning credentials. In summary, there are seven performance requirements and six written exams at Machining Level I	National Institute for Metalworking Skills, Inc. (NIMS)	Precision Machining Technology 8539/8540/8541
Macromedia Certified Professional Certification of knowledge and skill in a specific Macromedia software product. Macromedia-certified developers and designers are considered the elite of Web developers. This certification program is generally considered an advanced level industry certification. Individual assessments are available in the following areas: Certified Macromedia Flash Designer, Certified ColdFusion Developer, Certified Macromedia Flash Developer, Certified Dreamweaver Developer.	Pass an exam that demonstrates proficiency in one of the following Macromedia software products: Dreamweaver MX Certification exam (65 multiple-choice questions/70-minute closed book), Certified Macromedia Flash MX Designer (67 multiple-choice questions/70-minute closed book), Certified Macromedia Flash MX Developer (65 multiple-choice questions/70-minute closed book), and Certified ColdFusion Developer (65 multiple-choice questions/70-minute closed book).	Macromedia	Choose one of the following: • Design, Multimedia, and Web Technologies 6630 • Advanced Design, Multimedia, and Web Technologies 6631

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
Manufacturing Technology Assessment Occupational competency assessment of skills and knowledge covered in a secondary level program in manufacturing technology	Pass the NOCTI knowledge-based exam, Manufacturing Technology (1084), consisting of 175 items. Test includes math, science, measurement, communication skills, workplace safety, health and job skills, quality assurance (maintenance), blueprint reading, manufacturing fundamentals, processes and materials, planning and scheduling, production processing, material utilization, computer use, process control and improvement, time motion and costs, purchasing and resource identification activities, computer control functions, PLCs and automated manufacturing, communication processes, electrical/electromechanical fluid components, and design processes.	National Occupational Competency Testing Institute (NOCTI)	Choose one of the following: • Manufacturing Systems 8425/8426 • Advanced Manufacturing Systems 8427
Masonry, National Construction Career Test Certification of knowledge and skills defined as Level 1 competency in the masonry trade area. The certification exam is based upon the NCCER *Contren Learning Series* standardized curriculum.	Pass an exam that covers the following: introduction to masonry, safety requirements, tools and equipment; mathematics, drawings and specifications; mortar, masonry units, and installation techniques.	National Center for Construction Education & Research (NCCER)	Choose one of the following: • Building Trades 8515/8516/8517 • Masonry 8512/8513/8514
Master CIW Administrator* *** Certification for Web professionals who manage, develop security for, and tune corporate Internet and intranet infrastructure; monitor Web, FTP, news and mail servers; and configure and deploy e-business solutions servers	Pass a series of three knowledge-based exams (based on specific course material) to complete the Master CIW Administrator Certification Track. • Server Administrator • Internetworking Professional • Security Professional	Prosoft Learning Corporation	Instructional competencies and materials obtained from specific vendors may be used to prepare students for this certification. The course should be reported as Advanced Information Technology I 6680 or Advanced Information Technology II 6681.
Master CIW Designer* *** Certification for Web professionals who implement and maintain hypertext-based Web sites using authoring and scripting languages, create Web content, use Web management and digital media tools, and apply human-factor principles to design	Pass a series of two knowledge-based exams to complete the Master CIW Designer Certification Track: • Site Designer • E-Commerce Designer	Prosoft Learning Corporation	Instructional competencies and materials obtained from specific vendors may be used to prepare students for this certification. The course should be reported as Advanced Information Technology I 6680 or Advanced Information Technology II 6681. Choose one of the following: • Design, Multimedia, and Web Technologies 6630 • Advanced Design, Multimedia, and Web Technologies 6631

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
Master CIW Enterprise Developer*** A certification series that denotes high-level skills in the design, development, and administration of enterprise-level Web sites with sophisticated database connectivity	Pass a series of six knowledge-based exams to complete the Master CIW Enterprise Developer Track: • Web Languages • Application Developer • Java Programming • Object-Oriented Analysis & Design • Database Specialist • Enterprise Specialist	Prosoft Learning Corporation	Instructional competencies and materials obtained from specific vendors may be used to prepare students for this certification. The course should be reported as Advanced Information Technology I 6680 or Advanced Information Technology II 6681.
Master CIW Web Site Manager*** A certification for Web professionals who will develop and manage Web sites and services for small- to medium-sized businesses that do not typically employ large IT staffs	Pass a series of three knowledge-based exams to complete the Master CIW Web Site Manager Certification Track: • Server Administrator • Web Languages • Site Designer	Prosoft Learning Corporation	Instructional competencies and materials obtained from specific vendors may be used to prepare students for this certification. The course should be reported as Advanced Information Technology I 6680 or Advanced Information Technology II 6681.
Medical Assisting Assessment Occupational competency assessment of skills and knowledge covered in a medical assisting instructional program.	Pass the NOCTI knowledge-based exam (3055) consisting of 198 test items. Test includes general office procedures, general laboratory procedures and diagnostics, clinical procedures, patient instruction and foundations of healthcare.	National Occupational Competency Testing Institute (NOCTI)	Medical Assistant II 8346
Metalworking and Fabrication Assessment Occupational competency assessment of skills and knowledge covered in a secondary level program in metalworking and fabrication	Pass the NOCTI knowledge-based exam, Metalworking and Fabrication 2056, which includes 160 test items. Test includes benchwork and layout, lathes, sawing, milling, drilling, grinding, related theory, welding terms and symbols, shielded metal arc welding, oxyacetylene welding, gas tungsten arc welding, and gas metal arc welding.	National Occupational Competency Testing Institute (NOCTI)	Sheet Metal 8663/8664/8665
Microsoft Certified Applications Developer (MCAD)** Credential for professionals who develop and maintain department-level applications, components, Web or desktop clients, or back office services.	Pass two core exams: • One exam must focus on either Application Development or Windows Application Development in an area of choice. • Other exam focuses on core Web services and server components. Also, pass one elective exam.	Microsoft	Instructional competencies and materials obtained from specific vendors may be used to prepare students for this certification. The course should be reported as Advanced Information Technology I 6680 or Advanced Information Technology II 6681.
Microsoft Certified Professional (any Microsoft Professional Certification exam)* A measure of technical proficiency and expertise indicated by passing one of Microsoft's information technology industry certification exams, leading toward a more advanced Microsoft certification specialty program	Pass <u>one</u> current Microsoft information technology certification exam that provides a valid and reliable measure of technical proficiency and expertise (a current exam is any exam that has not been retired).	Microsoft	Choose one of the following: • Computer Network Software Operations 6650 • Advanced Computer Network Software Operations 6651 • Programming 6640 • Advanced Programming 6641

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
Microsoft Certified Systems Administrator (MCSA)*** Credential related to skills required to implement, manage, and troubleshoot the ongoing needs of Microsoft Windows 2000--based operating environments, including Windows .Net Server.	Pass three core exams and one elective exam. • Core exams include topics such as Installing, Configuring and Administering Microsoft Windows 2000 Professional (or Windows XP Professional)—Desktop, Server, and Network environment. • ComTIA's A+ and Network+ or A+ and Server+ may be substituted for the required MCSA elective exam.	Microsoft	Instructional competencies and materials obtained from specific vendors may be used to prepare students for this certification. The course should be reported as Advanced Information Technology I 6680 or Advanced Information Technology II 6681.
Microsoft Certified Systems Engineer (MCSE)*** Certification of knowledge and skills for information technology professionals who plan, implement, and/or support business solutions using Microsoft Windows Operating Systems and BackOffice applications software	MCSE candidates on the Microsoft Windows 2000 Track are required to pass five core exams and two elective exams.	Microsoft	Instructional competencies and materials obtained from specific vendors may be used to prepare students for this certification. The course should be reported as Advanced Information Technology I 6680 or Advanced Information Technology II 6681.
Microsoft Office Specialist (MOS)* A globally recognized standard for demonstrating desktop skills with the Microsoft Office Specialist suite of business productivity applications. Office Suite versions include the Office 2000, XP, and 2003. Certifications are available in specific MOS versions at several levels: specialist (core) or expert levels	Pass any <u>one</u> unique Microsoft Office Specialist exams at the specialist <u>or</u> expert levels (a minimum of <u>one</u> unique exam is required for student-selected verified credit eligibility).	Microsoft	Choose one of the following: • Computer Applications 6611 • Computer Information Systems 6612 • Advanced Computer Information Systems 6613 • Computer Network Software Operations 6650 • Advanced Computer Network Software Operations 6651 • Database Design and Management 6660 • Advanced Database Design and Management 6661 • Design, Multimedia, and Web Technologies 6630 • Advanced Design, Multimedia, and Web Technologies 6631 • Digital Input Technologies 6161 • Information Technology Fundamentals 6670 • International Baccalaureate Information Technology in a Global Society IB6613 • Keyboarding Applications 6152 • Legal Systems Administration 6735 • Medical Systems Administration 6730 • Office Administration 66216622 • Office Specialist 6640/6641/6642 • Word Processing 6625

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
Nail Technician Virginia state license to practice nail care	• Complete the training required by the licensing board as defined in the Code of Virginia. • Pass the written and performance elements of a Virginia licensing examination.	Virginia Board for Barbers and Cosmetology (Department of Professional & Occupational Regulations)	Nail Technician 8692/8693
National Automotive Technicians Education Foundation (NATEF) End of Program Test Series Examinations Assessment of specialty skill areas in automobile service and repair. Individual examinations are considered to be "pathway" examinations potentially leading to ASE industry certification in a specialty area.	Pass at least <u>two</u> of eight specialty exams in the following areas: engine repair, automatic transmission and transaxle, manual drive train and axles, suspension and steering, brakes, electrical and electronic systems, heating and air conditioning, or engine performance. Verified credit will be awarded for the passing of two specialty examinations.	National Automotive Technician Education Foundation (NATEF)	Choose one of the following: • Automotive Technology—Certified 8506/8507/8508 • Automotive Servicing—Non-Certified 8710/8711/8712
National Health Care Foundation Skill Standards Assessment This assessment is based on recognized foundational industry standards for the national health science career cluster.	Individuals must be considered eligible to take the assessment after successful completion of certain specified portfolio criteria as determined by the local instructor. The following National Health Care Foundation Skill Standards will be included on the assessment: communications, systems, employability skills, legal responsibilities, ethics, safety practices, teamwork, and health maintenance practices.	National Consortium on Health Science and Technology Education (exam administered by National Occupational Competency Testing Institute)	Choose one of the following: • Health Assistant II 8332 • Nursing Assistant II 8360/8362 • Practical Nursing II 8358

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
National Professional Certification in Customer Service Certification that documents knowledge and skills in the industry-identified area of Customer Service Skill Standards.	Pass an Internet-delivered, knowledge-based exam made up of real-life customer service situations, some presented through video and audio, with questions presenting possible courses of action.	National Retail Federation Foundation	Choose one of the following: • Marketing 8120/8121 • Advanced Marketing 8130/8131 • Fashion Marketing 8140/8141 • Advanced Fashion Marketing 8145/8146 • Hotel/Motel Marketing 8160/8161 • Advanced Hotel/Motel Marketing 8162/8163 • Global Marketing and Commerce 8135 • Advanced Global Marketing and Commerce 8136 • Marketing Management 8132 • Internet Marketing 8125 • Sports, Entertainment, and Recreation Marketing 8175/8176 • Advanced Sports, Entertainment, and Recreation Marketing 8177/8178 • Travel and Tourism Marketing 8165/8166 • Advanced Travel and Tourism Marketing 8167/8168 • Financial Services Marketing 8180/8181 • EFE Cooperative Education 9020/9030/9021/9031
Network+ Certification** Certification that candidates have knowledge of the layers of the OSI model, can describe the features and functions of network components and have skills needed to install, configure, and troubleshoot basic networking hardware peripherals and protocols.	Pass a written exam requiring knowledge of networking technology and networking application practices.	CompTIA	Advanced Computer Network Software Operations 6651
NRDA Certification (Dental Assisting) One of several certifications in the health sciences field offered by the National Association for Health Professionals.	• Complete a state-approved dental assisting program. • Pass a knowledge-based examination pertaining to common requirements and job functions of a dental assistant.	National Allied Health Registry/ National Association for Health Professionals	Dental Assistant 8329
NRDA Certification (Medical Assisting) One of several certifications in the health sciences field offered by the National Association for Health Professionals	• Complete a state-approved medical assisting program. • Pass a knowledge-based examination pertaining to common requirements and job functions of a medical assistant. •	National Allied Health Registry/ National Association for Health Professionals	Medical Assistant 8346

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
Nurse Aide Certification for individuals who perform patient care in support of registered professional nurses and other health care personnel	• Complete an approved nurse aide program. • Pass a practical and written test focusing on basic emergency procedures, vital signs, intake and output, bathing and oral hygiene, care of the skin, communication and interpersonal skills, infection control, patients' rights, restorative therapy, and the unique needs and behaviors of the cognitively impaired patient.	Virginia Board of Nursing	Choose one of the following: • Health Assistant II 8332 • Nursing Assistant II 8360/8362 • Practical Nursing II 8358
Nursing Assisting Assessment Occupational competency assessment of skills and knowledge covered in nursing assisting instruction	Pass the NOCTI knowledge-based exam (3058) consisting of 116 test items. Test includes basic nursing skills, personal care services, mental health and social service needs, client rights, employability skills, and basic restorative devices.	National Occupational Competency Testing Institute (NOCTI)	Choose one of the following: • Health Assistant II 8332 • Nursing Assistant II 8360/8362 • Practical Nursing II 8358
Oil Heat Certification Technicians responsible for service or maintenance of oil heating systems should be certified in this area. Oil heat requires more consistent regular service than any other heat system. Electrical Certification is prerequisite to the Oil Heat exam.	Pass a written exam focusing on the following: fuel oils, combustion products and byproducts, combustion efficiency, gun-type oil burners, nozzles, fuel oil pumps, oil burner components, ignition system, basic service procedures, and preventative maintenance.	HVAC Excellence	Heating, Ventilation, Air Conditioning, and Refrigeration 8503/8504/8505
Oracle Certification Program Examinations* A measure of technical proficiency and expertise indicated by passing one of the Oracle industry certification exams, leading toward a more advanced Oracle certification specialty program	Pass one current Oracle professional certification exam that provides a valid and reliable measure of technical proficiency and expertise in Oracle database design, development, operation, and maintenance. (A current exam is any that has not been retired.)	Oracle Corporation	Choose one of the following: • Database Design and Management 6660 • Advanced Database Design and Management (Oracle Academy) 6661
Outdoor Power Equipment Certifications A certification program that includes six tests (each one a certification), ranging from small outdoor power engines to compact diesel engines and generators	Pass any one of the following tests: 2-stroke engine, 4-stroke engine, electrical, drivelines, compact diesel, or generator to receive one of six Outdoor Power Equipment certifications.	Equipment and Engine Training Council (EETC)	Choose one of the following: • Introduction to Power, Structural, and Technical Systems 8016 • Small Engine Repair 8082 • Small Engine Technology 8725/8726/8727
Parts Specialist—Automotive or Medium/ Heavy Truck (ASE) Certification of knowledge, skills, and professionalism of parts specialists	ASE tests and issues a certification for each of the following three areas: medium/heavy truck parts specialist, automobile parts specialist, and medium/heavy truck aftermarket parts specialist.	National Institute for Automotive Service Excellence	Choose one of the following • Automotive Technology—Certified 8506/8507/8508 • Automotive Servicing—Non-Certified 8610/8711/8712

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
Plumbing: Residential Construction Academy Examination Examination of skills and knowledge covered in the course materials, "Residential Construction Academy: Plumbing," Thomson Delmar Learning in Partnership with the Home Builders Institute	Pass an online assessment that measures all areas of residential plumbing installations. The examination covers the following: materials, hand and power tools; pipe, fittings, valves and devices; fixtures and equipment; faucets and drain assemblies; equipment layout and installation; water distribution and installation; installation of waste drainage and vent systems; fixture and equipment installation; troubleshooting and plumbing repairs; and troubleshooting hydronic heating systems.	Thomson Delmar Learning/Home Builders Institute	Choose one of the following: • Building Trades 8515/8516/8517 • Plumbing 8551/8552/8553
Plumbing Assessment Occupational competency assessment of skills and knowledge covered in a secondary level program in the plumbing trade	Pass an exam that covers the following: introduction to the plumbing trade; plumbing tools; introduction to plumbing math; introduction to plumbing drawings; plastic pipe and fittings; copper pipe and fittings; cast-iron pipe and fittings; carbon steel pipe and fittings; fixtures and faucets; introduction to drain, waste, and vent (DWV) systems; and introduction to water distribution systems.	National Occupational Competency Testing Institute (NOCTI)	Choose one of the following: • Building Trades 8515/8516/8517 • Plumbing 8551/8552/8553
Pre-Engineering/Engineering Technology Assessment Occupational competency assessment of skills and knowledge covered in a secondary level pre-engineering program	Pass the NOCTI knowledge-based exam, Pre-Engineering/Engineering Technology (1475), with 179 test items. Test includes an overview of engineering, design process/problem solving, manufacturing, materials, communication and teamwork, safety, and engineering systems.	National Occupational Competency Testing Institute (NOCTI)	Choose one of the following: • Introduction to Engineering 8490 • Advanced Engineering 8491 • Principles of Engineering 8441 • Introduction to Engineering Design 8439 • Digital Electronics 8440
Precision Machining Occupational competency assessment of skills and knowledge covered in a secondary level program in precision machining	Pass the NOCTI knowledge-based exam, Precision Machining (2052), with 173 test items. Test includes organization and shop practices, measurement and inspection, shop math, interpretation of blueprints, design activities, benchwork, precision grinding machines, lathes, power saws, milling, cutting tool technology, drill presses, electro-discharge machines (EDM), computer numerical control (CNC), machine maintenance, metallurgical processes and heat treating, and application of technical information.	National Occupational Competency Testing Institute (NOCTI)	Precision Machining Technology 8539/8540/8541

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
PrintED Certification (All Exams) A certification program that validates competencies related to PrintED, the industry's national accreditation program for secondary and postsecondary graphic communications programs. The program currently includes three exams, with a certificate being awarded for each area.	• Complete an instructional program that has achieved the national PrintED accreditation. • Pass one exam (either Introduction to Graphic Communications, Press Operations, or Digital File Preparation) that validates competencies related to the PrintED industry-based curriculum for the graphics communications industry.	Graphic Arts Education and Research Foundation	Graphic Imaging Technology 8660/8661/ 8662
Production Agriculture Assessment Occupational competency assessment of skills and knowledge covered in typical Agricultural Production Technology and/or Management courses	Pass the NOCTI knowledge-based exam (1063) consisting of 164 test items. Test includes animal science, plant science, agriculture mechanics, farm management, record keeping, leadership, and employability.	National Occupational Competency Testing Institute (NOCTI)	Choose one of the following: • Agricultural Production Technology 8010 • Agricultural Production Management 8012
ProStart Program Certification (Levels 1 and/or 2) End-of-course examination for individuals who prepare for careers in the restaurant and food service industry. Indicated successful completion of either year 1 or 2 of the ProStart sponsored curriculum.	• Complete Year 1 or 2 of the industry-based ProStart sponsored culinary curriculum. • Pass the end-of-year ProStart program examination.	Education Foundation of the National Restaurant Association	Choose one of the following: • Culinary Arts I 8275 • Culinary Arts II 8276 • Culinary Arts 8521/8522/8523
Real Estate Salesperson Virginia state license to handle purchases and sales of real estate	• Complete the training required by the licensing board as defined in the Code of Virginia. • Pass the written and performance elements of a Virginia licensing examination.	Virginia Real Estate Board (Department of Professional & Occupational Regulations)	Real Estate Marketing 8191
Refinishing Technology Assessment Occupational competency assessment of skills and knowledge covered in typical secondary Automotive Body Technology and/or Repair programs	Pass the NOCTI knowledge-based exam, Refinishing Technology Assessment (1075), consisting of 196 test items. Test includes refinishing, detailing, corrosion and safety/environmental.	National Occupational Competency Testing Institute (NOCTI)	Choose one of the following: • Automotive Body Technology—Certified 8676/8677/8678 • Auto Body Repair—Non-Certified 8679/8680/8681

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
Residential Air Conditioning and Heating Certification (ARI) Certification offered by ARI and referred to as one of its Industry Competency Exams (ICE). It measures industry-agreed standards of basic competency for entry-level (one-year experience or less) technicians in the area of Residential Air Conditioning and Heating (equipment consists of 5-ton systems or smaller).	Pass an exam that contains 100 multiple-choice questions covering the ARI curriculum guide for Residential Air Conditioning and Heating.	Air Conditioning and Refrigeration Institute	Heating, Ventilation, Air Conditioning, and Refrigeration 8503/8504/8505
Retail Commercial Baking Assessment Occupational competency assessment of skills and knowledge related to retail commercial baking normally included in a secondary level culinary arts program	Pass the NOCTI knowledge-based exam, Retail Commercial Baking (0259), consisting of 200 test items. Test includes general baking knowledge, weights, measures, general baking math, classifications and properties of ingredients, handling and storage of ingredients, safety and sanitation, production/ scheduling/planning, yeast-raised dough products, doughnuts (cake and yeast-raised), cake decorating, cakes, laminated dough, cookies, pies and pastries, customer service, and merchandising of products.	National Occupational Competency Testing Institute (NOCTI)	Choose one of the following: • Culinary Arts I 8275 • Culinary Arts II 8276 • Culinary Arts 8521/8522/8523
Retail Trades Assessment Occupational competency assessment of skills, functions, and knowledge foundations related to marketing and merchandising occupations	Pass the NOCTI knowledge-based exam (2053) consisting of 199 test items. Test includes advertising, electronic marketing, visual merchandise, entrepreneurship, economics, communication, selling, employability skills, related mathematics, marketing/merchandising and human relations/customer service.	National Occupational Competency Testing Institute (NOCTI)	Choose one of the following: • Advanced Marketing 8130/8131 • Advanced Fashion Marketing 8145/ 8146 • Advanced Global Marketing and Commerce 8136
SENSE Training Program Certifications (Welding) Certification of knowledge and skills in welding for Level 1—Entry-Level Welder	To earn an AWS SENSE Level I (entry-level welder): • Complete the prescribed SENSE training program offered through an AWS-approved participating organization (program). • Pass the required written and performance-based certification examinations.	American Welding Society	Welding 8672/8673/8674
START Certification End-of-course exam that certifies satisfactory completion of the START curriculum related to line level occupations (Guest Service, Rooms Division, Food and Beverage Division) in the hospitality industry	Pass an end-of-course exam that covers specific areas of the hospitality industry. These areas include hospitality orientation, guest services, rooms division, front desk, reservationist, PBX operator, guest room attendant, maintenance worker, laundry attendant, public service cleaner, bell services attendant, and food and beverage division (restaurant server, banquet services, and bus person).	American Hotel and Lodging Association (AH&LA)	Choose one of the following: • Hospitality Services I 8202 • Hospitality Services II 8203 • Hotel/Motel Marketing 8160/8161 • Advanced Hotel/Motel Marketing 8162/8163

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
Student Electronics Technician Certification (SET) The SET certification program is designed for electronics students who have completed an electronics instructional program, but have not entered the work force. It certifies knowledge of basic electronics concepts and principles.	This exam is the student version of the journey-level certification exam (Certified Electronics Technician Associate—CTE). This multiple-choice exam covers basic electricity, electronics, math, AC & DC circuits, transistors, and basic troubleshooting skills.	Electronics Technicians Association, International (ETA)	Choose one of the following: • Electronics Technology 8536/8537/ 8538 • Electronics Systems I 8416/8417 • Electronics Systems II 8412 • Electronics Systems III 8413
Sun Certified Associate for Java 2 Platform* This certification is for entry level Java programmers and students interested in pursuing a career application development or software project management using the Java 2 Platform, Standard Edition (J2SE) technology.	Pass the Sun Certified Associate for Java 2 Platform exam (CX-310-019).	Sun Microsystems	Choose one of the following: • Advanced Database Design and Management 6661 • Advanced Programming 6641
Television Broadcasting Assessment Occupational competency assessment of skills and knowledge covered in a secondary level program in television broadcasting	Pass the NOCTI knowledge-based exam, Television Broadcasting (1427), consisting of 136 test items. Test includes pre-production, production, and post-production.	National Occupational Competency Testing Institute (NOCTI)	Television Production 8688/8689/8690
Telecommunications Electronics Technician Certification Certification of skills and knowledge related to telecommunications and electronics technicians	Pass an examination that measures knowledge of cables and cabling, analog telephony, equipment, telecom safety, transmission service, distribution methods, computer, digital telephony, interfacing, Internet, network infrastructures and topologies, office wiring, test equipment, troubleshooting, transmission protocols, mathematics, optical wiring, and wireless telephony.	Electronics Technicians Association, International (ETA)	Choose one of the following: • Electronics Technology 8536/8537/8538 • Telecommunications I 8650 • Telecommunications II 8651
UNIX Certificate* End-of-course certificate awarded upon successful completion of the course Fundamentals of UNIX. It provides a steppingstone to various Sun Systems Administrator certifications and the Linux+ certification from CompTIA.	Pass an end-of-course on-line exam which includes the following: how to use UNIX operating system commands, basic Sun Microsystems' Solaris operating environment commands, introduction to the Common Desktop Environment (CDE), and fundamental command-line features of the Solaris environment (file system navigation, file permissions, the vi text editor, command shells and basic network use).	Cisco Systems	Choose one of the following: • Computer Network Software Operations 6650 • Advanced Computer Network Software Operations 6651
Virginia Pharmacy Technician Certificate Certification of basic skills and knowledge to begin work as a Pharmacy Technician	• Complete the training as defined in the Code of Virginia. • Pass the Virginia Pharmacy Technician Examination.	Virginia Board of Pharmacy	• Pharmacy Technician I 8305 • Pharmacy Technician II 8306
Visual Communications Assessment Occupational competency assessment of skills and knowledge covered in a secondary level program that includes instruction in visual communications	Pass the NOCTI knowledge-based exam, Visual Communications Assessment (1425), consisting of 163 test items. Test includes visual literacy, conceptual design, color theory, typography, materials and tools, processes and procedures, and occupational overview.	National Occupational Competency Testing Institute (NOCTI)	Television Production 8688/8689/8690

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
Voice and Data Cabling Certification End-of-course certificate awarded upon successful completion of the course Fundamentals of Voice and Data Cabling. It provides stepping stone preparation to the BICSI Registered Installer, Level I, certification exam.	Pass one end-of-course examination covering the following areas: cabling issues related to data and voice connections; industry and worldwide standards; types of media and cabling; physical and logical networks; signal transmission; documentation, design, and installation issues; and safety issues.	Cisco Systems	Choose one of the following: • Computer Network Software Operations 6650 • Advanced Computer Network Software Operations 6651 • Electricity 8533/8534/8535
Web Design Certificate* End-of-course certificate awarded upon successful completion of the course Fundamentals of Web Design. It provides a stepping stone to various product certifications in the Adobe Expert program as well as Web design and/or digital media assessments from Brainbench.	Pass an end-of-course on-line exam that tests the following: Web site production processes; design elements involving layouts, navigation, and interactivity; and Web design exercises using Adobe applications. Web design applications are taught and tested using Adobe Photoshop, Adobe Illustrator, Adobe GoLive, Adobe LiveMotion, and Adobe Premiere.	Cisco Systems	Choose one of the following: • Design, Multimedia, and Web Technologies 6630 • Advanced Design, Multimedia, and Web Technologies 6631
Welding Occupational competency assessment of skills and knowledge covered in a secondary level program in welding	Pass the NOCTI knowledge-based exam, Welding (2072), consisting of 191 test items. Test includes thermal cutting processes, basic heat treat/metallurgy/ distortion control, welding terms/symbols/blueprint reading, weld inspection, knowledge of welding consumables, safety, power source principles, oxyfuel welding and brazing, shielded metal arc welding, gas metal arc welding/flux cored arc welding, basic knowledge of measuring instruments, welding qualifications and procedures, and welding costs.	National Occupational Competency Testing Institute (NOCTI)	Welding 8672/8673/8674
Welding, National Construction Career Test Certification of knowledge and skills defined as Level 1 competency in basic welding. The certification exam will be based upon the NCCER *Contren Learning Series* standardized curriculum.	Pass an exam that focuses on welding principles as contained in the *Contren* Learning Series curriculum, Welding Level One/AWS Entry Level Welder. The curriculum complies with the American Welding Society's "Schools Excelling through National Skills Standards Education" (SENSE) program.	National Center for Construction Education & Research (NCCER)	Welding 8672/8673/8674
WOW Certified Apprentice Webmaster (CAW)* Certification examination that measures essential competencies for aspiring or practicing Webmasters. The intent is to certify individuals in a body of knowledge that is identified and accepted as the baseline or foundation for a Webmaster.	Pass a 70-question exam in 60 minutes that demonstrates knowledge of the following: Internet basics, HTML, Web graphics, Web multimedia, Web site design, Web site management, Web project management, Web marketing, Web accessibility, and basic legal issues.	World Organization of Webmasters	Choose one of the following: • Design, Multimedia, and Web Technologies 6630 • Advanced Design, Multimedia, and Web Technologies 6631

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
WOW Certified Web Administrator Apprentice (CWAA)* Certification examination that measures fundamental competencies for aspiring or practicing Web administrators. The intent is to certify individuals in a body of knowledge that is identified and accepted as the baseline or foundation of any Web administrator.	Pass a 70-question exam in 60 minutes that demonstrates knowledge of the following: site administration and maintenance, networking basics, hardware and infrastructure, Web business management, and basic security issues.	World Organization of Webmasters	Choose one of the following: • Design, Multimedia, and Web Technologies 6630 • Advanced Design, Multimedia, and Web Technologies 6631
WOW Certified Web Designer Apprentice (CWDSA)* Certification examination that measures essential competencies for aspiring or practicing Web designers. The intent is to certify individuals in a body of knowledge that is identified and accepted as the baseline or foundation of a Web designer.	Pass a 70-question exam in 60 minutes that demonstrates knowledge of Internet basics, HTML and WYSIWYG editors, Web graphics, Web multimedia, Web site design, Web site management, and basic legal issues.	World Organization of Webmasters	Choose one of the following: • Design, Multimedia, and Web Technologies 6630 • Advanced Design, Multimedia, and Web Technologies 6631
WOW Certified Web Developer Apprentice (CWDVA)* Certification examination that measures fundamental competencies for aspiring or practicing Web developers. The intent is to certify individuals in a body of knowledge that is identified and accepted as the baseline or foundation of any Web developer.	Pass a 70-question exam in 60 minutes that demonstrates basic knowledge of programming, markup, scripting, dynamic Web site technologies, servers, networking, Web security, Web business management, legal issues, and Web accessibility.	World Organization of Webmasters	Choose one of the following: • Design, Multimedia, and Web Technologies 6630 • Advanced Design, Multimedia, and Web Technologies 6631